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UNIVERSITY IDEALS AS THE LIGHT OF LIFE[1]

THIS is the first time I have had the privilege of meeting you. My years are more than fifty. I hope I am still young. It makes me feel young to be here in your beautiful land. Yet my home is so far away and life is so short that I shall probably not have the fortune to see you again. And so this hour is to me an unusually precious one. Amid its rejoicings, in which I heartily share, I can not but feel a little the calming touch of solemnity. I have no wish to offer you a learned discourse, even if I could. I shall be content if I may say to you what I should hope you would say to a graduating class were a brother or sister or son or daughter of mine a member of it.

This day marks an epoch in your lives. In that consideration lies its main significance. For now a score of years, a little more or a little less, you have been receiving, in home and in school, the spiritual nurture that your ancestors, your fathers and mothers, your friends and fellow citizens of the commonwealth of Oregon have, with great self-sacrifice and infinite toil, provided for their children. A score of years in the infinite stretch of time from eternity to eternity is as a mere tick of a watch, but, viewed as a portion of our life's duration, it is very large. So complex is our modern life that the period of preparation for it—the time of our human infancy—must needs be long, a fourth of the whole even if our lives surpass the psalmist's allotment of threescore and ten. For you the great period of preparation, which will seem more precious in retrospect as the years go by, is now come to an end. You have attained your majority. With the blessing of your benignant mother you pass to-day from her sacred halls into what is called the world. Hitherto you have received; henceforth you are to give. You may or may not accumulate material wealth. You may or may not win fame. Whatever your vocation, whatever your station, you will find that the secret of happiness is in devoted service of your fellow men and women. I can not wish you a nobler form of service nor a greater good fortune than to represent worthily in the conduct of your lives the ideals of a great university. If you realize that that is at once your greatest privilege and your highest obligation, you are to be congratulated. In the course of your studies, so important a matter can not, I am sure, have entirely escaped your attention. In any case I beg to commend it to you for meditation. Worthily to represent in speech and in life the ideals of a great university—I can not think of a greater subject nor of a nobler aspiration. It is indeed the essence and core of all that is worthy of toil and, rightly understood, it is the sum of obligation. How unworthy it would be to think of an institution of higher learning as an institution established and maintained for the sole benefit of the relatively few who are fortunate enough to dwell for a season in her immediate presence, to touch the hem of her garment, to come into personal contact with her scholars and teachers and to receive her degrees. The graduates of a

[1] Commencement address delivered at the University of Oregon, June 16, 1915.

college or a university are of course human beings and, because they are human beings, the advancement of their personal welfare is a thing to be desired. It is a good in itself. But to be satisfied with that, to fancy, or to conduct our lives as if we fancied *that* good to be the sole or even the principal aim and justification of the institution, would be disgraceful. Such a conception is not even the beginning of wisdom. It is infinitely far from true. A university rejoices in the personal welfare of her children, but their personal prosperity is not her main concern nor her final aim nor her principal justification. She regards her alumni, not as ends, but as means. She regards these immediate and very special beneficiaries of her service, and she expects them to regard themselves, as instrumentalities for extending her ministrations to ever wider and wider circles. To these there is no limit. A great university can truthfully say: "The world is my country and to do good my religion." The sun, we say, is far off yonder in the heavens. But strictly speaking, the sun really *is* wherever he shines. Where is the University of Oregon? At Eugene, we answer, and the speech is convenient. But it is juster to say that, owing to the influence of her alumni, owing to the pervasiveness of her light and inspiration, the University of Oregon in a measure now is, and in larger and larger measure will come to be, in every home and school, in every factory and field, in every mine and shop, in every council chamber, in every office of charity, or medicine, or law, in *all* the places near or remote where within the borders of this beautiful state children play and men and women think and love, suffer and hope, aspire and toil. Nay, by the researches and publications of her scholars and by the migrations of those she has inspired and disciplined, the University of Oregon will more and more live and move abroad, mingling her presence with that of kindred agencies, not only in every state of the union, but in many other parts of the civilized world.

What is a university? How shall we conceive that marvelous thing which, though having a local habitation and a name and seeming to dwell in houses made by human hands, yet contrives to be omnipresent; pervading the abodes of men everywhere throughout a state, a nation or a world, like a divine ether; subtly, gently, unceasingly, increasingly ministering to their hearts and minds healing counsels and the mysterious grace of light and understanding? What is it? Is it something, an agency or an influence, that can be defined? We know that it is not. We know that the really great things of the world, the things that live and grow and shine, the things that give life its interests and its worth, one and all elude formulation. Yet it is just these things, beauty and love, poetry and thought, religion and truth and mind, it is precisely these great indefinables of life that we may learn, through experience and discipline, to know best of all. And so it is with what we mean or ought to mean by a university. What a university is no one can define, but all may in a measure come to know. By pondering its principles, by contemplating its ideals, by examining its aims, activities and fruits, above all by sharing in its spirit and aspiration, we may at length win a conception of it that will fill our minds with light and our hearts with devotion.

Where such a conception reigns a university will flourish. But there is no conception more difficult for a people to acquire. A worthy conception of a university is not a spontaneous growth. It does not spring up like a weed. It requires careful planting and cultivation. Such is the husbandry to which a university must

perpetually devote itself as the essential precondition to the prosperous exercise and advancement of all its other functions, and the husbandry is not easy. Especially in our American communities where universities must appeal for support to the intelligence of a democratic people, there is no service more important or more difficult to render than that which consists in teaching us to understand what a university really is and what it signifies alike for developing the material resources of the world and especially for the spiritualizing of man. And thus there devolves upon a university, especially in the beginning of its career, the necessity of performing a kind of miracle: without adequate support, either material or moral, it must yet find strength to teach us to give it both. The lesson is one that takes long and long to teach because it is one that takes long and long to learn.

It is a great mistake to imagine that a university is an essentially modern thing. In spirit, in idea and essence, it is modern only in the sense in which forces and ideals that are eternal are always modern, as they are always ancient. We should not forget that even the name university—so suggestive of the infinite world which it is the aim of these institutions to subjugate to the understanding and uses of man—even the name, in its modern scholastic sense, has had a history of more than a thousand years. But we know that the institution itself, the thing that bears the name, owns an antiquity far more remote. A few years ago, standing upon the Acropolis of Athens, gazing pensively about upon the hallowed scene where culminated the genius of the ancient world, a friend, pointing towards the spot nearby where for fifty years Plato taught in the grove of Academe, said to me: "Yonder, yonder is the holy ground where was made the first attempt to organize higher education in the western world." The remark, which was just enough, was indeed impressive. It is easy, however, to misunderstand its significance and to exaggerate its importance. So many of the most precious elements of our civilization trace their lineage back to the creative activity of ancient Greece that we are naturally tempted to imagine we may find there also the source and origin of those aims, activities and ideals which constitute what we to-day call a university. Such imagining, however, is vain. The originals, the first organizations, we may possibly find there at a definite time and place, but not the *origin*, not the *source*, not the nascence of the birth-giving and life-sustaining power. For this must account, not only for the universities of our time, but for the great school of Plato as well. What, then, and where is the secret spring?

Shall we seek it in a sense of need? Necessity is indeed a keen spur to invention and is the mother of many things. But necessity is not the mother of universities. The beasts flourish and propagate their kind without the help of institutions of learning, and without such help a similar existence is possible to men. Universities are not essential to life nor to animal prosperity. They are not creatures, they are creators, of need. We do indeed nowadays hear much of the services they render, and it is right that we should, for they minister constantly and everywhere to countless forms of need. But the needs they supply are in the main needs that they have first produced—multiplied desires and aspirations, new propensions of mind awakened to new life, lifted by education to higher levels and ampler possibilities of being. No, the origin, the source we are seeking, the principle of explanation, is no human contrivance nor institution nor sense of

need. It is that sovereign urgency, at once so strange and so familiar, that drives us now to seek it: it is the lure of wisdom and understanding, of beauty and light: a certain divine energy in the world, at once a cosmic force and a human faculty constituting man divine in constituting him a seeker of truth and a lover of harmony and light.

Has it an epoch and a name? It has both. In accordance with the modern doctrine of evolution the greatest events upon our planet occurred long before the beginnings of recorded history. For according to that doctrine there must have come a time, long, long ago, when in what was a world of matter there began to be mind, in what was a world of motion there began to be emotion, and the blind dominion of force was invaded by personality. Among all those marvels of prehistoric history, the supreme event was that one but for which this world had been a world devoid of mystery and devoid of truth—I mean the advent of wonder. With the advent of wonder came the sense of mystery, the lure of truth, the sheen of ideality, the dream of the perfect and, with these, the potence and promise of research and creativeness with all their endless progeny of knowledge and wisdom and science and art and philosophy and religion. These things, children of the spirit, offspring of wonder, these things are the interests which it is the divine prerogative of universities to serve, and the universities ultimately derive their own existence, their sustenance and their power from the same mother that gives their charges birth. A genuine university is thus the offspring and the appointed agent of the spirit of inquiry; it is the offspring, expression and servant of that imperious curiosity which in a measure impels all men and women, but with an urgency like destiny literally drives men and women of genius to seek to know and to teach to their fellows whatsoever is worthy in all that has been discovered or thought, spoken or done, in the world, and at the same time seeks to extend the empire of understanding endlessly in all directions throughout the infinite domain of the yet uncharted and unknown. That high commission is at once a university's charter of freedom and the definition of her functions and her obligations. These functions and obligations are, on the one hand, to teach—to teach with no restrictions save those prescribed by decency and candor—and, on the other hand, to foster and prosecute research—research in any and all subjects or fields to which the leading or the stress of curiosity may draw or impel.

And so it is seen that a great university represents all of the higher interests of mankind. It stands for all that is worthy in the life of man. It believes in the continuity of development and advancement, knowing, what we are prone to forget, that the present can be understood only in the light of the past. A great university always feels and always fosters a divine discontent. It has visions and dreams of excellence not yet attained. It knows that the merely good is the enemy of the best. Never satisfied with what has been achieved, it steadily sees "the angel of progress leaning from the far horizon beckoning man onward and upward forever," and it perpetually responds to the inspiring call. A great university honors every form of human service, however humble, and every species of honest toil. But it does not regard man as a mere practician; it does not regard him merely as a hewer of wood and drawer of water; it does not conceive man as an animal content to serve the instincts for food and shelter and reproduction. A university contemplates man as a spiritual being, as a thinker, dreamer, poet, as a

lover of knowledge and beauty and wisdom, responding to the lure of an ideal destiny, troubled by the mystery of a baffling world, conscious subject of tragedy, yearning for stable goods, for infinite freedom and a thousand perfections of life. A great university believes in action, in utilities, in efficiency, in prosperity, and it is the most potent agency in the world for the promotion of these things; but it does not worship them; it does not regard them as final or supreme. It knows that understanding is superior to action, that ideas are better than utilities, that enlightenment is above efficiency, that magnanimity is more excellent than prosperity; for it knows that without intelligence and magnanimity—without light and soul—no form of being can be noble and every species of conduct must be but a kind of blundering in the night. A great university does not regard man as if he were created to be the servant of utilities, trades, occupations, professions, or what we call careers; man is not for these things, they are for *him;* they are not ends, they are means. A man building a bridge is greater than the engineer; a man writing verse is greater than the poet; a man bending over a test-tube is greater than the experimenter; a man presiding at a trial is greater than the judge. A great university never loses sight of the fact that man is superior to any of his occupations. It knows that his supreme vocation is not law nor medicine nor theology nor commerce nor war nor journalism nor chemistry nor physics nor mathematics nor banking nor literature nor legislation nor any specific science or art or activity. It knows that man's supreme vocation is intelligence. It does not say: Intelligence is good because it prospers you in your trades, professions and careers. It says: These things are good because and in so far as they prosper intelligence. And what does a great university conceive the office of intelligence to be? It conceives the function of intelligence to be that of contributing to being or reality or life in its highest form, which consists in understanding, for, with understanding, all good things are possible, but, without it, nothing good is possible save by the favor of accident or chance. Do you desire to take issue? Do you desire to say that the office of intelligence is to enable us to adjust ourselves to our environment? Let it be granted. But what is our environment? Is it merely or mainly a matter of sensible or physical circumstance—sea and land and sky, heat and cold, day and night, seasons, food, raiment, shelter and the like? Far from it. As men and women, as members of society, as inheritors of the wisdom of the past, entitled to its enjoyment and charged with transmitting it, increased, to those who are to come after us, as spiritual beings with such prerogatives and such obligations, we know that our environment consists mainly of spiritual circumstances—ideas, I mean, and sentiments, doctrines, sciences, institutions and arts. If by environment of life you mean mainly this invisible and intangible environment, in which, properly speaking, we live, move and have our being, if you mean the ever-changing and ever-developing world of spiritual things, then, when you say that the office of intelligence is to enable us to adjust ourselves to our environment, you are in full accord, as I understand it, with the ideals of a great university.

These ideals express and represent what I have called the divine energy in the world. As university graduates, whether you are to be leaders or followers, professional men and women or business folk, high-placed or humble, it is your highest privilege and highest obligation to illustrate these ideals, to maintain them, and to

advance them among men. In so far as you do so, your lives will be successful. Such a life is noble, but it is not easy. It means encountering in the ordinary walks of life and in high places of influence continuous and powerful opposition, open and secret, well-meaning and selfish, blind and half-enlightened, sincere and insincere. It means not being thus overcome nor dismayed. It means perpetual resistance to the most powerful, most insistent and most insidious of evil temptations—the temptation to let well enough alone, satisfied with the good, unheeding the call of the best. It means "clinging to the ideal despite the down-rending pull of the actual." It means invincible devotion to the things of mind. But the reward is certain—the highest happiness attainable in our world.

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THE RELATION OF THE MUNICIPAL UNIVERSITY TO THE EDUCATIONAL SYSTEM[1]

It is a common attitude to regard the municipally supported institution of higher education as a new fad undertaken by a few venturesome cities in much the same spirit as the municipal dance hall or orchestra—a sort of cross between a public benefit and a civic advertisement—in short an experiment probably destined to be short lived. Persons with this idea are usually amazed at learning that of our six municipal universities, three were founded in the first half of the last century, and two others in the seventies and eighties respectively, or in other words, the youngest municipal university (except my own institution) is thirty years old and the two oldest have been in existence for over eighty years. In all cases, these schools are operated for the purpose of performing for the people of their cities functions more or less similar to those of the state university for the larger geographical unit—note, I say *geographical*, since the population of several of these cities compares favorably in number with that of some states where publicly supported universities flourish unquestioned.

The General Education Board in its recently issued report calls attention to the local character of the attendance at most colleges. It is just this element, amplified by the advantages of free tuition and the avoidance of expense by "living at home," which gives to the city university its right to exist and which has called forth from such an educational authority as Professor Cattell, of Columbia, the statement:

> I entirely agree with you as to the great importance of establishing municipal universities, which will probably be the most important movement of higher education in the next generation.

But doubtless I have already blown loudly enough on the municipal university trumpet to bring you to a realization of our existence and of our right to existence from the standpoint of the cities themselves. How, now, shall the city college take its place among its fellows of the educational system both high and low—the common schools, the high schools, the privately endowed colleges and finally the universities? Shall it link them together in a chain, shall it duplicate their efforts in part, or shall it seek out some new field of its own, hitherto untouched? No simple answer can be given to this complex question. So much depends upon the location and character of the institution itself—so wide are the differences between the already existing schools, that each part of the question deserves a separate consideration. The summary might well serve to outline the theory of the municipal university, were it the consensus of

[1] A paper read before the North Central Association of Colleges and Secondary Schools in Chicago in March, 1915.

opinion of all interested rather than that of an individual.

Let me state briefly in the beginning that the municipal university has informally adopted "Service" as its watchword. It is ever alert to coordinate itself helpfully with all good interests of its community and most particularly with the educational system. Opportunities for such cooperation with the common schools might at first seem rare enough, yet Cincinnati's municipal university has found mutual advantage in placing the students of its Teachers' College into the public schools for practise teaching and in return for this service on the part of the schools has sent back to them competent and well-equipped teachers from among the graduates of its Teachers' College in the public schools calculable value has been performed by the same institution through its department of psychology. I quote from a recent report:

> This work is of two kinds, academic and practical. The academic work consists of training school psychologists, preparing teachers for special schools in connection with the teachers' college and special school No. 3 of Cincinnati, and systematic research work. The practical work is devoted to the diagnosis of the nature of the mental deficiency of the backward children brought in by teachers in the schools and by parents. Hundreds of cases have been examined and directions given for their treatment and development. This department also cooperates with the school medical inspectors and teachers in the special public schools for defectives in the arrangement of courses, methods, etc.

If the audience will pardon an occasional reference to my own institution, I may say that our department of sociology has been able to render some assistance to the grade schools by sending out a few mature students to organize and take charge of boys' recreational clubs in various school buildings. For this work and certain studies made in connection with it, credit is given on the college course and judging from the interest which some of our students are developing in the work, I should say that the benefits were far from being one-sided.

The correlation of municipal university with city high schools presents a somewhat different problem. Just as in the case of the grade schools, the high schools furnish an excellent field for the practical training of teachers and the university can repay this debt by returning its graduates as trained instructors for high-school work. The most important cooperative work, however, must necessarily come in the arrangement of high-school and college courses in such manner that close interrelation exists —so that the student intending to enter the municipal university may receive training in the high school toward that end, while the university, on its side, should give enough latitude in the nature of its entrance requirements within the fifteen units to allow a student from any course in the city high schools to enter without difficulty. It goes without saying that no entrance examinations should bar the step from high school to municipal college courses, entrance to the latter being granted on certificate of graduation, but the college should reserve the privilege of rejecting those who, after a reasonable probationary period, show themselves as unfit for college work. It is also needless to say that the municipal university as well as the high school should use every effort to avoid duplication of courses. Thus it would be as unfitting for the university to maintain a preparatory school or a "sub-freshman" class as it would for the high school to offer postgraduate or junior college work. Certain difficulty may even arise over the discrepancy between the fourteen units necessary for conditional college entrance and the sixteen units required for graduation from high school. If the municipal university accepts students for conditional en-

trance on fourteen units it is practically an open invitation to high school students to so arrange their course that the last semester of high school may be omitted entirely and conditioned entrance to college be sought on fourteen units. My own institution has recognized the right of the public high schools of the city to keep their students for the full four-year period by adding to its statement on entrance requirements the following:

> No student will be received from the Akron high schools with less than sixteen units of work without recommendation of the superintendent of schools.

Of value beyond all other things is a complete sympathy and good feeling between the administrative powers of the public schools and the municipal university. In fact, it is still an open question as to whether these two boards should not be interlocking or even identical. The practise of the various municipal universities in this respect is interesting: The municipal universities of Charleston, Louisville, Toledo and Akron have entirely separate boards of trustees with no connection with the city boards of education. The University of Cincinnati also has a separate board, but one of its schools, Teachers' College, is governed by a joint committee from the university directors and the board of education. The College of the City of New York is the only municipal university which was actually founded by the board of education, rather than by the city council. From 1866 to 1900 the members of the board of education served, ex officio, as trustees of the college. In 1900 the legislature created a separate board of trustees, composed of nine members, to be appointed by the mayor, charged with the sole care and control of the college. Of this board, the president of the board of education of the city of New York is, ex officio, an additional member.

What now of the relation between municipal university and privately endowed college? Here the whole great question of the development of our private colleges is concerned. Roughly speaking, the institutions of higher learning in the United States may be divided into the urban and the non-urban class. The urban class is surprisingly small in number, consisting of about 130 institutions in cities of 75,000 people or over as compared with some 400 located in non-urban communities. This latter and larger class of private institutions can scarcely be brought into any organic relation with the municipal university, except of course in the case of universities supporting graduate schools—a phase which I shall discuss a little later. The smaller class, however, which includes those private colleges and universities in large centers of population, has to face the same problems and conditions as the municipal university. That the interests of both private and tax-supported city institutions are similar was evidenced last November by the meeting in Washington of representatives from some twenty colleges and universities located in our largest cities for the purpose of forming the "Association of Urban Universities," the name "urban" being chosen as inclusive of both tax-supported and private city institutions. The purpose of this new association is to discuss primarily ways and means of cooperation with civic interests—a subject as vital to the college as to the city. The fact that such influential institutions as the University of Pittsburgh, New York University, and Johns Hopkins were represented, and such widely separated cities as Boston, Mass., St. Louis, Mo., and Portland, Ore., shows plainly the trend of educational feeling in our urban institu-

tions. This desire for closer relation to the community is further evidenced by the effort now being made to form an organization to promote practical training for public service in colleges and universities, this being the offspring of work initiated by the American Political Science Association. All these things seem to me to show that the problems of the municipal university are not far removed from those of any other university located in a city. To such an extent, indeed, is this true that the wish seems to be growing in our cities to build up municipal institutions on the foundation of private colleges. Thus, for instance, when my own institution showed that 70 per cent. of its students were drawn from the city of Akron and only 11 per cent. from the denomination to which it owed its foundation, the city awoke to its responsibility and assumed the burden of educating its own citizens. In a similar way, Cleveland has discussed the problem of uniting its various institutions of higher education into a municipal university of Cleveland, an undertaking naturally fraught with great difficulties. These things all point to the fact that the municipal university bears a perfectly natural and regular relation to the educational system of the modern city, giving the privilege of higher education to a class of students whom even the state university can not reach.

The ever-growing tendency on the part of state universities to enlarge the scope of their graduate and professional schools and to devote proportionately smaller and smaller sums to the needs of the individual undergraduate (if indeed the closely herded undergraduates of the state university have any individuality left) has caused the administrators of some of these institutions to admit frankly that the high-school graduate would be profiting much more by remaining for his first two, or even three years of college work, in his home community where perhaps a private college or a municipal university might minister to his needs. There is, as every thinker must realize, a well-defined educational current in motion to-day toward the use of the college, no longer as an ultimate end in itself, but rather as a means of preparation for work in the specialized school of scientific or professional study. Thus the state university is quite rightly and logically assuming the more complicated and expensive "graduate" functions as its own, while the smaller private college is being crowded, often protesting and against its will, into the work of preparing for the specialized course—a rôle which for some mysterious reason appeals to many college faculties as beneath their dignity. In this educational maelstrom, the mission of the municipal university is well defined. It must stand forth boldly and regardless of any false pedantic pride for the principle of giving to students that training which they desire most. If this be the full four-year college course, well and good; but if it be the three-year combination course with the graduate school of a state university or a great privately endowed university, no jealousy nor petty desire to keep students for another year should obscure its duty of service to the people. Indeed a state educational system organized with public schools and municipal universities in every large center of population as feeders for the scientific and graduate schools of the state university would seem to represent an almost ideal plan.

As the city grows to such a size that its population warrants the inclusion of the entire educational system within its boundaries, the municipal university may properly undertake the establishment of graduate and professional schools unless such schools already exist in connection with well-established private institutions. It is

for these reasons, doubtless, that the College of the City of New York has wisely confined its work to the undergraduate grade, depending on Columbia for specialized graduate training, while Cincinnati on the other hand has been forced to establish an elaborate system of professional schools to meet the needs of her large community in the absence of private institutions.

While only a great metropolitan center can afford to have a municipal university with graduate schools or with professional schools requiring from two to four years of college work for admission, the smaller city may seek to develop its institution of higher learning into such schools or courses as may be entered by students directly from the public high schools. Such work usually represents the amplification of certain departments of the regular college of liberal arts. Thus the department of chemistry may train men to meet the technical needs of local industries, as for example, we in Akron have instituted a special course for training men in the chemistry of rubber. The department of psychology or of education may cooperate with the local public schools and gradually develop into a teachers' college. The departments of mathematics and physics may expand their work to assume the proportions of an engineering college, the new type of cooperative work in alternating periods between shop and college being particularly adapted to the purposes of a municipal institution. A school of home economics for the women, or a library school cooperating with the public library system are also desirable possibilities for any city university, even though located in a smaller center. Such opportunities for practical cooperative training are numerous on every hand and should form the especial aim of the municipal university.

In conclusion I wish to mention briefly a few points of contact between the municipal university and that broader modern conception which regards the educational system as widely extended beyond the walls of our schools and colleges—which looks upon all life and its activities as a training ground needing only the touch of intelligent contact to open up its possibilities. Just as all the world was a stage to Shakespeare's mind, so all the world is now a laboratory of immediate practical usefulness to the learner. To establish this contact between theory and reality is the ultimate goal of the municipal university. We are already striving toward this end at Cincinnati and Akron by sending engineering students out into the shops and factories of the city to supplement textbook instruction by a study of actual engineering work in the doing. My own institution has at present half a dozen students working part time in various departments of the city government under the joint direction of the professor of economics and the local bureau of municipal research, and we expect next year to establish a class for advanced students in chemistry which shall do work in solving the actual chemical problems of the city, under the joint direction of the department of chemistry and the city chemist, who is a member of our faculty and has his laboratories in our chemistry building. Students in the department of sociology can get experience with actual conditions (and in fact have already done so) by acting as deputy sanitary and housing inspectors under the direction of the board of health, as charity workers under the director of public charities or as playground supervisors and leaders of boys' clubs in the public schools. I realize that the thought of giving college credit for work such as that just mentioned will seem to many of my hearers as rank educational heresy. It should be remembered, however, that all such extra-mural activities are supervised by the various

college departments, supplemented by lectures, reports and recitations and coordinated into the general system of instruction as laboratory work. To my own mind, such activities as the foregoing serve two great purposes: they vitalize college work for the student and they serve to bring him in touch during his formative period with the interests of his community and thus to make him a better citizen.

I trust that this rambling discussion has not left you with the idea that the municipal university is something in every way different from the ordinary college or university, for, after all, the essentials are the same. If the municipal university has any particular educational mission, it is to prove that the college course is not necessarily an end within itself, but rather a means to an end—that "the college exists for the student, not the student for the college" and finally that the activities of everyday life may well be utilized as the real laboratory of human training.

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EXHIBIT OF HIGH-SCHOOL MATHEMATICS—ITS HISTORY AND EDUCATIONAL VALUE

THE author of this article is not willing to admit that mathematics, well organized and properly taught, is in any great danger of being replaced by a subject that is more practical and interesting. There are abroad, however, many discussions and suggestions as to omissions and additions that might possibly be made in the mathematics courses in the high school, and it may not be amiss, in the light of all these discussions and suggestions, to relate some experiences in organizing and developing a permanent exhibit of high-school mathematics at the university high school of the University of Chicago. Very little has been written in regard to mathematical exhibits, but there is undoubtedly much good to be obtained from them. It will be the purpose of this article to show that mathematics can be made practical, that it has been made interesting, and that mathematics exhibits are a means of increasing both interest and efficiency in mathematics. If the results of any part of these experiences can be incorporated with profit into the plans for mathematical exhibits in other high schools, then this article will be justified.

This experiment was begun three years ago when it was thought that an exhibit properly constituted and carefully considered and discussed, not only by the teachers of mathematics, but by the pupils as well, might lead to a greater interest in the subject-matter and to a desire for greater efficiency in all of the high-school mathematics classes. It was not clear at that time what might best be done to arouse this interest and to secure this efficiency; but after some discussion among the members of the mathematics department a few valuable ideas were suggested that might give rise to new interest and greater individual activity among the pupils in the mathematics classes. Thus the work was begun in the hope that, as material for the exhibit was collected, subsequent plans and actions would be determined. To this end, bulletin boards about five feet long and four feet wide, made of cork, were placed in each of the mathematics class rooms; and upon these boards the work of the different classes in mathematics was posted from day to day in order that the pupils, and also visitors, might observe what was being done.

The papers to be posted were chosen on the basis of neatness, importance of subject-matter, care in development of proofs, unusually good independent work, and special

reports. These papers were referred to by the instructors from time to time and discussions leading to improvement in future work were carried on in class. In addition to the work of the pupils, any items of mathematical importance secured by either the teachers or the pupils were posted on these boards. In this way great interest was aroused in these class-room exhibits, and the improvement in the general quality and appearance in all written work, to say nothing of the increase in mathematical power, has been ample reward for all the effort expended in organizing and preparing such exhibits.

A friendly spirit of rivalry has always existed among the students, and a desire on the part of all to be well represented, especially in the annual mathematics exhibit, has made the work a pleasure. This same spirit gives rise to a desire for independent work of a research type that is a valuable asset in later mathematical work.

When exhibited work is taken down from these bulletin boards, it is filed under proper headings so that any particular kind of material is always available. Some of these classifications are for the first year: Algebra, geometry, correlation, geometric constructions with ruler and compass, use of squared paper, scale drawings, trigonometric work, historical material, recreations. There are similar classifications for each of the four years. Besides these there are certain classifications of work regardless of the year in which it was done, showing the development of a certain idea in mathematics, *e. g.*, the notion of function.

In addition to the written work, geometry models and special devices for use in the class room have been made by pupils in the mathematics classes to illustrate some theorem or to clarify some mathematical concept, and these are a part of the permanent exhibit.

In view of the objection offered by some to the exhibition of models and, in some cases, even to the making, it is fair to say that in all of the author's experience the best models, with one or two exceptions, have been made by pupils who were poorest in giving logical demonstrations of the theorems for which the models were made. It is also interesting to note that these same pupils who at first could not discuss the theorems were able to talk about the models they had made with clearness and with much comfort to their minds as well.

As to further use of models, it may be said that much is to be gained in many cases after the logical demonstrations have been given by assigning concrete problems of measurement based upon these models. This can be made a valuable piece of work.

A model may also be made to serve another purpose. For example, a boy in one solid geometry class constructed a solid fulfilling all the requirements of the definition of a prism found in several current texts, but which he said did not conform to his idea of a prism at all and the entire class voted that his idea of a prism was the correct one. As a matter of fact, the definition was faulty according to the opinions of most teachers in mathematics. Who would say that this boy was not making legitimate use of a model?

A great deal more might be said about individual work of this kind which is not a required part of the mathematics course, but which is almost sure to appear if the pupils know it will receive careful and appreciative consideration. For example, a boy in a trigonometry class made a device, illustrating the functions of a general angle. A device for showing the line definitions of the trigonometric functions (apparatus described in Wm. F. White's "A Scrapbook of Mathematics," page 146) was made

by a boy in the trigonometry class and is a part of the permanent exhibit.

Various other examples of independent work might be mentioned, such as the drawing of trigonometric curves, illustrated reports of problems in surveying, discussion of geometrical and physical paradoxes, attempts to trisect an angle together with an historical account of such attempts, collection of different methods of proof for the same theorem and many other items akin to what are often subjects for discussion in high-school mathematics clubs, and in which the pupils are vitally interested.

Enough has now been said to give an idea of the nature of some of the independent work that is done by pupils who are really interested in mathematics, and who have discovered that they can really do something independently.

The question of organization of the material in an exhibit has been an interesting one and a short account of the author's experience here may be helpful.

In the beginning the material was arranged in certain definite groups as follows: Algebra, geometry, correlation, uses of squared paper, scale drawings, trigonometry, the notion of function, etc., in much the same order in which it was collected. Last year it was thought best to organize the exhibit on the basis of the order in which the work was done, and so the work was shown as first year mathematics, second year mathematics, third year mathematics, fourth year mathematics.

This year it was decided that a combination of the two plans mentioned above was desirable. Accordingly the work was shown, not only by years, but also in certain special and significant groups, care being taken not to duplicate much of the work. It was also decided that it would be a significant and valuable thing to exhibit samples of all four years of a given pupil's work in mathematics rather than to have so many samples of different pupils' work. In this way the progress made all along the line by this one pupil is shown in a very interesting way. This appears to be a very significant thing to do in any exhibit.

The exhibit the first year was held only at the university high school as a part of the annual exhibit of the school of education of the University of Chicago. Last year the exhibit was shown in connection with the mathematics section of the Conference of Academies and High Schools in Relation with the University of Chicago and at this meeting an invitation was extended to the other schools to send exhibits for this year. Small but impressive and characteristic exhibits were sent in by the Oak Park, Francis Parker and J. Sterling Morton High Schools, and these, together with exhibits from the university elementary and high schools, constituted one of the main items of interest at this year's meeting. The exhibit was studied carefully and discussed with enthusiasm by members of this conference. Several schools have indicated a desire to be represented in next year's exhibit in the hope that some valuable educational results may be obtained.

To give a clear idea of the exhibit as it exists to-day at the university high school would involve a great deal of detailed information as to the nature of the material and its order in this exhibit. However, a few remarks may not be amiss at this point.

The entire exhibit with the exception of models and class-room devices has been placed in a permanent case made up of wooden leaves arranged like the leaves of a book. Upon each side of these leaves is a pasteboard containing the written work and other features of the exhibit arranged in the following order:

1. A general statement concerning the aim and methods for each course offered.

2. Some statistics comparing the work of the mathematics department with the other departments of the high school and also a comparison of the results obtained by the teachers within the mathematics department based upon the final grades for each year for the last three years.

3. Copies of the final examinations given in each of the mathematics courses.

4. Material showing the nature of the work done in mathematics by years illustrating the various phases of the work, but no attempt is made to classify distinctly.

5. Special classifications of subject-matter such as algebraic work, geometric work, correlation, the use of squared paper, scale drawings, trigonometric work, the notion of function, graphs, special problems, historical material and various methods of proof.

6. Mathematical recreations of all kinds consisting of paradoxes and their explanation written up by pupils, newspaper and magazine clippings such as Stephen Leacock's "Education made Agreeable," an article on a champion billiard match accompanied by a geometrical picture, and any other articles with significant references to any part of the mathematics course.

7. Graphs showing the use made of the concept of function in the business world: such as the barometer of the wheat and stock market, egg charts, etc.

8. Papers written by pupils showing how mathematics work may be correlated with other departments.

9. Finally, at the end of the exhibit, is the following material pertaining largely to the relation of the library to the school:

(*a*) Pedagogical books every teacher of high-school mathematics should own.

1. The Teaching of Mathematics—J. W. A. Young.
2. The Teaching of Elementary Mathematics—D. E. Smith.
3. The Teaching of Geometry—D. E. Smith.
4. The Teaching of Mathematics in Secondary Schools—Arthur Schultze.
5. Mathematical Education—G. St. L. Carson.
6. Mathematics in Secondary Schools—G. W. Evans.
7. Arithmetic and Algebra—Sir Oliver Lodge.
8. The Teaching of Algebra (and Trigonometry)—T. Percy Nunn.
9. The Teaching of Geometry—Carson.
10. The Teaching of Mathematics in the Higher Schools of Prussia—J. W. A. Young.
11. Monographs on Topics of Elementary Mathematics Relevant to the Elementary Field—J. W. A. Young.
12. Fundamental Concepts of Algebra and Geometry—J. W. A. Young.
13. Industrial Mathematics—H. W. Marsh.
14. Didaktik des mathematischen Unterricht—Alois Hoefler.
15. Reports of the International Commission on the Teaching of Mathematics—U. S. Bureau of Education.

(*b*) Pedagogical books that should be in every high-school library if the town has no public library or school of education in connection with it.

1. A selection of the list under (*a*) above should be made and this selection should be adopted to the needs and size of the school and the community.

(*c*) Pedagogical books that should be in the public library.

1. A selection depending upon the needs and the size of the town selected from (*a*) above.

(*d*) Mathematical text-books that should be in every mathematics teacher's library.

1. A representative selection from all the modern texts on high-school subjects and all the standard older texts.

(*e*) Number of mathematical text-books a high-school library should have.

1. A list of from twenty-five to fifty books chosen upon the basis of the standards given above ought to be sufficient. This number can be changed from time to time to suit the conditions. (See Bulletin No. 35, 1913, published by the U. S. Bureau of Education, "A List of Books Suited to a High-school Library.")

(*f*) Number of mathematical text-books a public library should have.

1. All under *d* above *at least*.

(*g*) Magazines every teacher of mathematics should take or read regularly.

1. *School Science and Mathematics.*
2. *The Mathematics Teacher.*
3. *The American Mathematical Monthly.*
4. Two good technical magazines, *e. g.*, *Scientific American, Scientific American Supplement.*
5. Other educational periodicals, *e. g.*, *School Review*, SCHOOL AND SOCIETY, *Manual Training* and *Vocational Education.*

(The above should be in the high-school library if possible. Certainly they should be in the public library.)

(*h*) How a teacher may keep in touch with current articles of mathematical interest.

If the high-school librarian is not handicapped by having to teach, she will have time to do a great deal of careful reading, and as she reads it is an easy matter for her to jot down the articles that will be of particular interest to the different departments, provided there exists a proper relation between all of the departments and the library. This in some cases has been found to be a most valuable aid. This is similar to the service given by the librarian to the various departments in business houses.

(*i*) Methods that may be used by the mathematics department in the high school in teaching the pupils to use and appreciate the library.

1. Pupils may be sent to the library to read an especially good treatment of a certain subject, *e. g.*, introduction of logarithms, and give a report of what is read in class. This was actually done in one class this year when the question arose as to how the change of bases might be made and the discussion was not in the regular class text.

2. Pupils are always interested in reading about the lives of the great mathematicians. This year several have written histories in their own words, based upon such reading, of some of the great mathematicians, and these are on file with the portraits of these great mathematicians. This work is correlated with the work of the English department.

3. There are some books aside from the histories which reflect more or less some very interesting facts connected with the lives of great mathematicians and inventors. These are often enjoyed by high-school pupils. A good example is Sophy Winthrop's "Sister and Saint," reflecting events in Pascal's life. This work may be made to correlate very definitely with the work in English.

4. Pupils may be helped to see the relation of mathematics to practical problems that arise during their vacation, *e. g.*, a boy at a summer camp wanted to know the distance from one shore of a lake to the opposite shore in order to lay out a swimming course. He was directed to books in the library on trigonometry and surveying that gave him the desired information.

5. If a school has a mathematical club

the library is invaluable as a storehouse of rich program material of all kinds.

6. Pupils may be directed to practical astronomy texts which have problems related to the solid geometry and trigonometry and which are not beyond many high-school pupils.

7. Charts showing especially good work on fundamental theorems should be filed in the library not only for the use of the pupils, but also for beginning teachers.

8. Aside from the exhibit, clippings from the daily papers, magazines, government documents, etc., relating to items of mathematical interest should be indexed and kept on file in the library for the teacher's use.

9. In a school where practise teaching is common it is valuable to have on file outlines of lessons for the different mathematical courses which the practise teacher may be asked to teach on short notice.

10. The instructors in the mathematics department should go over the list of mathematics books with the librarian at the beginning of the year and help her to obtain all the information she will need in guiding the pupils to the proper books in their study. She might even give a lecture to the pupils on the use of these books.

11. If the study room is under the supervision of the librarian as it is at the university high school, the librarian is a very great help to the pupils in their study. (See list of "Study Helps" below prepared largely by the librarian at the university high school.)

STUDY HELPS FOR STUDENTS OF THE UNIVERSITY HIGH SCHOOL

The habits of study formed in school are of greater importance than the subjects mastered. The following suggestions, if carefully followed, will help you make your mind an efficient tool. Your daily aim should be to learn your lesson in less time, or to learn it better in the same time.

1. Make out a definite daily program, arranging for a definite time for each study. You will thus form the habit of concentrating your thoughts on the subject at that time.

2. Provide yourself with the material the lesson requires; have on hand maps, ruler, compass, special paper needed, etc.

3. Understand the lesson assignment. Learn to take notes on the suggestions given by the teacher when the lesson is assigned. Take down accurately any references given by the teacher. Should a reference be of special importance, star (*) it so that you may readily find it. Pick out the important topics of the lesson before beginning your study.

4. In the proper use of a text-book, the following devices will be found helpful: index, appendix, footnotes, maps, illustrations, vocabulary, etc. Learn to use your text-book, as it will help you to use other books. Therefore understand the purpose of the devices named above and use them freely.

5. Do not lose time getting ready for study. Sit down and begin to work at once. Concentrate on your work, *i. e.*, put your mind on it and let nothing disturb you. Have the will to learn.

6. In many kinds of work it is best to go over the lesson quickly, then to go over it again carefully; *e. g.*, before beginning to solve a problem in mathematics read it through and be sure you understand what is to be proved before beginning its solution; in translating a foreign language, read the passage through and see how much you can understand before consulting the vocabulary.

7. Do individual study. Learn to form your own judgments, to work your own problems. Individual study is honest study.

8. Try to put the facts you are learning into practical use if possible. Apply them to present-day conditions. Illustrate them in terms familiar to you.

9. Take an interest in the subjects taught in school. Read the periodical literature concerning these. Talk to your parents about your school work. Discuss with them points that interest you.

10. Review your lessons frequently. If there were points you did not understand, the review will help you to master them.

11. Prepare each lesson every day. The habit of meeting each requirement punctually is of extreme importance.

For further information concerning the real significance of the high-school library in relation to the modern high school the reader should consult Table XL., page 100.

Bulletin No. 6, 1915, United States Bureau of Education.

In closing it ought to be emphasized that an exhibit should be changed and improved from time to time as new ideas and better plans arise, but it seems clear to all who have had experience with these exhibits that they have a place in any curriculum, not only as a help and inspiration to the pupils and teachers in mathematics, but to the public as well, who, after all, are often a great deal more interested in what we are doing than we think.

It is of vital importance that mathematics teachers offer an opportunity for pupils to do constructive work such as is illustrated in the exhibit described above. This chance to do constructive work is in accord with the trend of modern educational thought relating to mathematics, one phase of which is shown in the fact that pupils dealing only with the abstract in mathematics fail absolutely to realize the service of this subject in their daily lives unless the fact is brought to their attention during their school career.

W. D. REEVE

UNIVERSITY HIGH SCHOOL,
UNIVERSITY OF CHICAGO

EDUCATIONAL EVENTS

EDUCATIONAL LEGISLATION

LAWS have been enacted, as we learn from the Bureau of Education, in Alaska and several states as follows:

ALASKA

Providing for a uniform system of schools for the Territory of Alaska. This system will embrace all the present common schools of high, grammar, primary and kindergarten grades, and all such others as may be hereafter created, but will not include United States government schools for natives of Alaska. The general supervision of these public territorial schools will be vested in a board of education consisting of the territorial governor, treasurer and assistant superintendent of public instruction, with the governor *ex-officio* president of the board. The first assistant superintendent of public instruction is to be appointed by the governor and will hold office until March 1, 1919; thereafter he will be elected every four years. His annual salary will be $3,000. Twenty-five per cent. of the forest-reserve fund is appropriated for the maintenance of the public-school system. The board of education is made the final court of appeal in all educational controversies, and is given supervision of all expenditures of funds expended for the public schools. The assistant superintendent of public instruction is to have, with the governor's approval, supervision of all matters relative to the public schools.

FLORIDA

Providing for medical inspection of school children, under the supervision of the state board of health. This act does not apply to cities of over 5,000 inhabitants where such inspection has already been established by the city board of health and is continued in accordance with the rules prescribed by the state board of health.

Requiring that the evil effects of alcoholic beverages and narcotics be taught to all children between 6 and 12 years of age, in the public school.

ILLINOIS

Providing that the high-school tuition of students living in a district not having a high school and attending a high school of another district, be paid by the county in which the student resides, out of the county's share of the state distributive school fund.

Providing for a state teachers' pension and retirement fund, to be managed by a board of trustees consisting of the superintendent of public instruction and the state treasurer as *ex officio* members, and three others to be elected for a term of three years by contributors and annuitants.

Authorizing the board of school directors to establish kindergartens and to grant the use of school buildings for recreational, social and civic meetings.

Providing for physical training in all grades of the public schools.

Making it the duty of the state superintendent of public instruction to prepare with the advice of the state board of health, the state architect and the state fire marshal, school-building specifications for the minimum requirements for heating, ventilation, lighting, seating, water supply, toilets, and safety against fire; and making it the duty of the county superintendent to inspect the

school-building plans submitted to him by school authorities in his jurisdiction and to approve the plans complying with the rules published by the state superintendent, and to request the state board of health, the state fire marshal, or the state architect to inspect public-school buildings which appear to him to be unsafe, insanitary or unfit for occupancy. Provision is made for withholding the distributive fund from any district that does not comply with the state regulations.

MASSACHUSETTS

Establishing a department of university extension to be under the control of the board of education. The head of this department is to be appointed by the board of education, with the approval of the governor and council, and is subject at any time to be removed by the board. This department is authorized to cooperate with institutions of learning in university extension and correspondence courses; to establish and conduct, where advisable, such courses for residents of the state; and to supervise extension and correspondence courses supported wholly or in part by the state. This act, however, will not affect the Massachusetts Agricultural College extension and correspondence course work in agriculture and allied subjects.

NEW YORK

Extending the benefits of the retirement fund for teachers to teachers in state institutions for the deaf, dumb and blind.

PENNSYLVANIA

Appropriating $100,000 for the purchase of state normal schools.

WISCONSIN

Extending the provisions of the free tuition law applying to four-year high schools so that state graded schools of the first class, offering two years of high-school work, will receive tuition not to exceed $1 per week for each non-resident student coming from a district which does not support a high school. The school, to receive this tuition, must have its entire course approved by the state superintendent.

Authorizing school boards in cities of the first three classes to provide suitable equipment for educational activities, such as evening schools, vacation schools, reading rooms, etc., when these are in the custody of boards having charge of public parks, libraries, lyceums, and other public buildings.

Providing that all able-bodied male students in any college may receive instruction and training in military tactics, and that the requisite arms be furnished by the state.

Providing that when the weather permits the United States flag be displayed from a flag staff on each schoolhouse or school grounds during school hours.

PHI BETA KAPPA AT THE UNIVERSITY OF CHICAGO

During the academic year 1914–15 at the University of Chicago sixty members were added to the Beta of Illinois Chapter of Phi Beta Kappa, this being the largest number ever added in a single year in the history of the chapter.

The officers recently elected for the new year are: *President,* Professor Robert Andrews Millikan, of the department of physics; *Vice-president,* Associate Professor David Allan Robertson, of the department of English, and *Secretary-treasurer,* Associate Professor Francis Wayland Shepardson, of the department of history.

The total membership of the chapter is 580, this membership including five honorary members, a small number of alumni of the old University of Chicago, and all graduates of the new university previous to the time of the institution of the chapter who had a grade high enough to warrant their selection.

During the present year the University of Chicago chapter has issued a revised edition of its *Handbook,* this being a publication of over a hundred pages containing, besides the roll of members, a historical sketch of the general fraternity and detailed information regarding the founding of the Chicago chapter.

The latter was instituted sixteen years ago, and the preliminary correspondence was carried on by Harry Pratt Judson, then dean of the faculties, now president of the University of Chicago, who is a member of the Williams Chapter of Phi Beta Kappa.

The charter at Chicago was granted to ten men, including William Rainey Harper, Harry Pratt Judson, Eliakim Hastings Moore, Thomas C. Chamberlin, John Ulric Nef, William Gardner Hale, Albion Woodbury Small,

and Paul Shorey. The ten men represented ten different departments in the university.

Among the Phi Beta Kappa orators at the University of Chicago have been President Cyrus Northrup, of the University of Minnesota; Professor Paul Shorey, head of the department of Greek in the University of Chicago; President Benjamin Ide Wheeler, of the University of California; Hon. Charles Francis Adams, the historian, of Boston; Bliss Perry, editor of the *Atlantic Monthly;* Walter Hines Page, American Ambassador to Great Britain; Judge Julian W. Mack, of the United States Circuit Court, and Professor Charles Edward Merriam, of the department of political science in the University of Chicago.

The presidents of the Chicago chapter have included Harry Pratt Judson, Paul Shorey, J. Laurence Laughlin, William Gardner Hale, George Edgar Vincent, James Hayden Tufts, Thomas C. Chamberlin, Albion Woodbury Small, and James Parker Hall. The secretary of the chapter for the last fifteen years has been Francis Wayland Shepardson, associate professor of American history.

The growth of this chapter of Phi Beta Kappa at Chicago is a striking illustration of the renewed interest in scholarly work and accomplishment throughout the country.

LIBRARIES OF THE UNITED STATES

THERE are over 18,000 regularly established libraries in the United States, containing more than 75,000,000 volumes, according to statistics just compiled by the United States Bureau of Education. The number of volumes is an increase of 20,000,000 since 1908.

Of the 2,849 libraries containing 5,000 volumes or over, 1,844 are classified as "public and society libraries," and 1,005 are school and college libraries. Public and society libraries have an aggregate of over fifty million volumes, with seven million borrowers' cards in force; 1,446 of these libraries were entirely free to the public.

Libraries reporting from 1,000 to 5,000 volumes numbered 5,453, of which 2,188 were public and society libraries, and 3,265 school libraries. These libraries contained 11,689,942 volumes. Another group of still smaller libraries, comprising those that reported from 300 to 1,000 volumes, increased the total by 2,961,007 volumes.

The distribution of library facilities is still uneven. Of the 1,844 public and society libraries reported for the entire United States, more than half were in the North Atlantic states, and they contained 24,627,921 volumes out of a total of fifty millions; and of the three million volumes added to the library collections for the year 1913, almost one half were for the same section. New York state had 7,842,621 volumes in her 214 libraries; Massachusetts, 7,380,024 in 288 libraries; Pennsylvania, 3,728,070; and Illinois, 3,168,765 volumes. Four fifths of the borrowers' cards in use were in the North Atlantic and North Central states.

Library activity for the past year was marked, according to the Bureau of Education report, by "considerable extension of the branch system, particularly in the granting of library privileges on the part of cities to neighboring suburban communities; by further development of the country library plan in many states; and in general by a visible growth in the spirit of service that is characteristic of many of the formal educational institutions of to-day. The period of the library as a mere storehouse of books seems to be safely past; it has yielded to a period of direct community service."

EDUCATIONAL NOTES AND NEWS

DR. PLINY T. SEXTON, of Palmyra, was elected chancellor of the University of the State of New York by the regents at their regular meeting on July 27, succeeding the late St. Clair McKelway, editor of the Brooklyn *Eagle*. Dr. Sexton is the senior member of the board of regents, having been elected in 1890, and has been vice-chancellor since 1913. Dr. Sexton is a lawyer and banker by profession, and is seventy-five years of age. Dr. Albert Vanderveer was elected vice-chancellor.

A MARBLE chair is about to be placed in the

open-air Greek theater of the University of California in honor of Eugene Waldemar Hilgard, professor of agriculture and dean of the College of Agriculture from 1875 to 1906, and now professor emeritus.

THE University of Edinburgh has conferred its doctorate of laws on Sir Robert Blair, educational officer of the London County Council.

AT the recent commencement of the University of Cincinnati, the degree of LL.D. was conferred upon President Sidney Mezes, of the College of the City of New York.

DR. FERDINAND LATROBE SCHMIDT, professor of education at Berlin, has been elected president of the Comenius Society.

PROFESSOR WILLIAM STERN, of the University of Breslau, has been elected an honorary member of the Hungarian Society for the Study of Children.

LEAVE of absence has been granted by the board of trustees of the University of Chicago to Dr. Pietro Stoppani, of the department of Romance languages and literatures. The leave of absence extends for a year from the opening of the autumn quarter in October. Dr. Stoppani intends to enter the Italian army, and expects to be assigned to service in the hospital corps.

DR. ELLSWORTH E. FARIS has been appointed associate professor of psychology, with special reference to social psychology, in the University of Iowa.

THE following are new appointments to the instructing staff of the Massachusetts Institute of Technology: H. Langford Warren, A.M., of Harvard, lecturer on architectural history; George Owen (M. I. T., '94), assistant professor of naval architecture; Royal M. Frye, A.B., instructor in physics; William Eustis Brown, instructor in public health administration (School for Public Health Officers).

THE following resolution was unanimously adopted by the Board of Directors of Toledo University, the Municipal University of Toledo, Ohio, at their last meeting:

WHEREAS, as the result of his visit to Toledo, Dr. Scott Nearing has expressed an interest in the work and mission of our municipal university and has indicated his willingness to give serious consideration to any offer which the university might make to him,

Be it Resolved, that the board of directors hereby extend to Dr. Scott Nearing a cordial invitation to become professor of social science in the university and dean of the college of arts and sciences.

The president of the university in informing us of this action states that the board of directors felt that Dr. Nearing's experience and training were such as to enable him to render very valuable service to the university in its endeavor to put into practise part of the social program advocated by Dr. Nearing in his books.

SOME changes have been made in the personnel of the University of Vermont faculty for next year. Dr. P. E. McSweeney has been elected professor of obstetrics, to succeed the late Dr. A. F. A. King, and Dr. O. N. Eastman has been elected assistant professor of obstetrics. Professor W. T. Jackman has resigned as assistant professor of commerce and economics, and Professor Edward Wiest, of Columbia, will succeed him. Dr. Swift and Professor Donahue have been permanently elected to their chairs, Dr. Swift as the head of mathematics and Professor Donahue as assistant. Professor Andrews resigns as registrar and becomes professor of public speaking and drama, and associate in the department of English. F. W. Kehoe, acting registrar, becomes registrar in Professor Andrews' place. Miss Bernardine Kimball of the graduating class becomes instructor in physical education for young women, in place of Mrs. F. W. Stone, resigned.

WE learn from the *Athenæum* that Dr. J. S. Mackenzie, professor of logic and moral philosophy at the University College, Cardiff, and his wife, Mrs. Millicent Mackenzie, professor of education in the women's department at the same college, are vacating their respective chairs, with the object, in Dr. Mackenzie's case, of devoting himself to the completion of a philosophical work on which he has been engaged for some time. His successor is to be

Mr. Hector J. W. Hetherington, formerly assistant to the professor of moral philosophy in Glasgow University, and for the last session lecturer in the same subject in Sheffield University. Mr. Hetherington is at present engaged on a study of the idealist movement in Italian philosophy. Miss Barbara Foxley, formerly mistress of method in the Victoria University, Manchester, is to be Mrs. Mackenzie's successor.

SIR KRISHNA GUPTA presided at a meeting held at the house of Lady Muir-Mackenzie, on July 14, for the adoption of a memorial to Mr. Chamberlain, the secretary of state for India, on the subject of the education of women and girls in India. The memorial, adopted on the motion of Mrs. Yusuf Ali, seconded by Lady Emily Lutyens (daughter of the late Lord Lytton), while recognizing the inherent difficulties of the subject on account of the customs and social prejudices of the people, and gratefully acknowledging the past efforts of the government, expressed disappointment that the number of girls under instruction in British India is only the equivalent of 3,910 for every million of the population. It held that the enormous disparity of 1 to 5 in the number of girls and boys under instruction in British India constitutes a grave danger to the social well-being of the Indian communities. The memorialists prayed that the whole question should be thoroughly examined by a representative committee, consisting mainly of Indians of all communities, including Indian ladies, in association with ladies connected with or interested in education in this country. A committee was appointed, with Sir Krishna Gupta as chairman and Mr. Yusuf Ali and Miss Bonargie as joint honorary secretaries, to take the necessary further steps.

TWENTY-TWO educators of Washington, one of Idaho and one of Wisconsin, have been initiated into Phi Delta Kappa, the honorary educational fraternity, at the University of Washington. All were studying or teaching in the summer session. Dr. Henry Suzzallo, president of the university, who is a member of the Columbia chapter, and United States Commissioner of Education Dr. P. P. Claxton were guests of honor. Dr. Frederick Bolton, director of the summer session, was toastmaster. Dr. Daniel Starch, of the University of Wisconsin, who is teaching in the summer session, was made an honorary member.

THE program of the third annual meeting of the Association of Western Agricultural Colleges which will be held at Berkeley, August 9–10, 1915, is as follows:

Monday, August 9, 2 P.M. Address by W. J. Kerr, president of the association. "The Development of Research Work in Western Colleges," by M. A. Brannon, president, University of Idaho.

Tuesday, August 10, 10 A.M. "Prominent Work of Western Stations with Suggestions for Possible Future Coordination," by T. F. Hunt, dean college of agriculture, University of California. Open discussion.

Tuesday, August 10, 2 P.M. "Necessity for Further Organization under the Smith-Lever Act," by C. A. Lory, president of Colorado Agricultural College. Discussion of western extension work and suggested improvements, by C. B. Smith, agriculturist in charge, Office of Farmers' Cooperative Demonstrations North and West, Washington, D. C. Open discussion: motion pictures, short course cooperation, etc. Election of officers and other business.

The meetings will be held at the University of California. The president may announce other meetings if same are considered necessary, following the discussions of Tuesday afternoon. The institutions included in the association are: Arizona, California, Colorado, Idaho, Montana, Nevada, New Mexico, Oregon, Utah, Washington, Wyoming.

IN connection with the work of the college of commerce and administration at the University of Chicago during the summer quarter a series of lectures on various subjects involved in public and philanthropic service is being given. On July 16 Director Charles Hubbard Judd, of the school of education at the university, described the Carnegie Foundation for the Advancement of Teaching, in the series on "American Foundations"; on July 20 and 27 Assistant Professor Scott E. W. Bedford, of the department of sociology and anthropology, gave illustrated addresses on "Municipal Esthetics" and "Municipal

Nuisances"; and on July 21 the director of the Hamilton Park Playground and Recreation Center, Mr. Clarence E. Rainwater, gave an illustrated account of "The Evolution of the Playground" and on July 28 discussed "The Literature of Play and Recreation."

THE Medical College of the University of Cincinnati has received several large donations during the past month. Mrs. Mary M. Emery promised the university the sum of $250,000 for a new medical college building, on the condition that an additional $250,000 be raised by July 1 for its equipment and maintenance. At the appointed time, Dean C. R. Holmes, of the College of Medicine, announced that $250,000 had been secured. The new structure will be located on grounds adjacent to those of the Cincinnati General Hospital, which occupies 24 buildings and covers 27 acres, and which offers unusual opportunities for clinical instruction. The sum of $30,000 has just been raised by citizens of Cincinnati for the purpose of maintaining for three years a chair of medicine in the Medical College. The chair will be known as the Frederick Forchheimer chair of medicine, in honor of the late Dr. Frederick Forchheimer, who was for years professor of medicine at the Medical College. Dr. Robert S. Morris, lately of Clifton Springs, New York, and formerly of Ann Arbor and of Johns Hopkins University, has been appointed to the new position.

A SEPARATE department of chemical engineering on the same plane as the mining, civil, electrical and mechanical engineering departments will be established in the Columbia graduate engineering school next fall. The head of this department will be Professor Milton C. Whitaker, who has been the professor of engineering chemistry for the past five years. For the past ten years the university has offered courses leading to the degree of chemical engineer in the department of chemistry but the rapidly increasing importance of these industries based upon the applications of chemistry and the subsequent demand for men especially trained in fundamental engineering problems has led the university to supplement these courses with the more elaborate facilities and opportunities offered in a separate chemical engineering department.

PLANS have been tentatively adopted by the faculty of the Ohio State University for graduate courses leading to a master's degree for those who desire to study public health. The proposed course would cover a year's work. While the outline has not been announced, it probably will embrace a thesis for original work on some public-health problem. The plan has been indorsed by the state board of health and its secretary, Dr. E. F. McCampbell, who is a member of the university faculty, is working out some of the details.

THE new announcement of the West Virginia University states that on and after September 1, 1917, two years of collegiate work, including courses in physics, chemistry, biology and French or German, will be required for admission to the medical school.

THE University of Cincinnati is again giving a pre-medical summer course in physics, analytical chemistry, organic chemistry and zoology. The term lasts from June 7 to August 14, a period of ten weeks.

THE faculty of the New Hampshire College, which includes the president of the college, the dean of the college, professors, associate professors and assistant professors, has been arranged in three divisions, agricultural, engineering and academic. For each of these a dean has been named as follows: For agriculture, Professor F. W. Taylor, head of the department of agronomy; for engineering, Professor C. E. Hewitt, head of the department of electrical engineering; for arts and science, Professor E. R. Groves, head of the department of sociology. Professor C. H. Pettee remains dean of the college as a whole. The new deans will form an advisory body, a faculty cabinet, to assist the president in some of his administrative work, and through them the president will make his official inquiries as to the work in any one of the three divisions.

WITH an enrollment of 30 men and women and a registration of almost 600 children between the ages of five and sixteen years, the

play and playground work course in the reorganized department of physical education of the Ohio State University is entering on its second year. Full credit in the colleges of arts and education is given for this course of two hours. The work is under the supervision of Professor J. W. Wilce, of the department of physical education. Miss Dorothy Bocker has the direction of the dances, girls' swimming classes and games. The course includes lectures on play, theory and practise of plays and games and other playground activities, with actual practise in teaching on the playground which has been fitted up at the southwest corner of Ohio Field. Swings, teeters, a slide, a large sand pile, trapeze, outdoor basketball courts and quoits are among the amusements provided. In addition there are the dances, swimming in the gymnasium pools for the children and under supervision of members of the course, and baseball and track athletics for the boys. A badge contest was held on July 10 for the boys and consisted of three events: broad jump, 60-yard dash and high jump. During the last week in July a group game and athletic contest was given for all children registered in the playgrounds. Regular hours are maintained in the work, and assistants are always on the ground to direct the play.

THE Department of Agriculture and Technical Instruction for Ireland has, as we learn from *Nature*, issued as a pamphlet a descriptive account of the Irish Training School of Domestic Economy. The school is situated at St. Kevin's Park, Kilmacud, Stillorgan, Co. Dublin. The premises stand in grounds of about three acres, in one of the finest situations in South County Dublin. The house provides ample accommodation for the staff and students, in addition to class and recreation rooms. The school is a residential institution, maintained by the department of agriculture and technical instruction for Ireland, for the purpose of training teachers of domestic economy, and also for providing a training in household management for girls who have received a satisfactory education. The work of the school comprises two courses of instruction—a course of instruction extending over one year in household management, the object of which is to train girls for the management of their own homes, and a further two years' course of training for teachers of domestic economy.

THE registrations for the summer quarter of the University of Chicago, totalling 3,746, surpass all previous records. In the graduate schools of arts, literature and science 875 men and 550 women have registered, a total of 1,425 as compared with 1,210 a year ago. In the senior and junior colleges, including the unclassified, 543 men have registered and 541 women, a total of 1,084, as compared with 1,051 a year ago. The total registration in the departments of arts, literature and science is 2,509, as against 2,261 for the last summer quarter. In the divinity school 269 students are enrolled; in the law school, 162; in the courses of medicine, 109; and in the college of education, 825—making a total of 1,365 in the professional schools, as compared with 1,269 a year ago. Excluding duplications, 1,940 men and 1,806 women are now in attendance at the university, a grand total of 3,746, as compared with 3,371 a year ago.

THE summer session of the University of California for 1915 by June 30, nine days after the beginning of the six-weeks' term, had enrolled 5,240 students, which was more than 2,000 more than on a corresponding date the year before and which was only 52 less than the largest total registration at any one time in the academic colleges and graduate school for the fall or spring sessions—excluding students in the professional colleges. Among the visiting members of the faculty for the summer session of 1915 were Professors Stockton Axson, Rice Institute, Houston, Texas; Meyer Bloomfield, director of the vocation bureau, Boston, and special professor of vocational guidance in Boston University; Adolfo Bonilla y San Martin, professor of the history of philosophy in the University of Madrid; George Lincoln Burr, Cornell; John Merle Coulter, Chicago; Max Farrand, Yale; Stephen

Warren Gilman, Wisconsin; Charles H. Haskins, Harvard; Clark W. Hetherington, Wisconsin; Herman G. James, associate professor of government and director of the Bureau of Municipal Research and Reference in the University of Texas; Carl Kelsey, Pennsylvania; Cassius Jackson Keyser, Adrain professor of mathematics in Columbia University; William Fielding Ogburn, Reed College; Horatio W. Parker, Yale; Mazyck P. Ravenel, Missouri; William A. Scott, Wisconsin; Julius Stieglitz, Chicago; Merle Thorpe, Kansas; Frederick J. Turner, Harvard; and Samuel Williston, Harvard; and also Dr. Henry Herbert Goddard, director of the department of research in the Training School, Vineland, New Jersey; Dr. J. Franklin Jameson, director of the department of historical research, Carnegie Institution, and managing editor of the *American Historical Review;* Ernest Richard Kroeger, director of the Kroeger School of Music, St. Louis, Mo.; J. Melvin Lee, lecturer on journalism in New York University, and Dr. William F. Snow, secretary of the American Social Hygiene Association.

The *Minnesota Alumni Weekly* says: "A great deal of criticism has been aroused during the present session of the legislature concerning the amount of time devoted to class-room work by various professors. It is pointed out that some professors have but ten hours of class-room work a week, with the implication that this is all the time which the professor devotes to his university work. In order to meet this objection, the president of the university has called for statistics from the members of the faculty asking the amount of time devoted to work in each of the following lines: Hours in classroom; in laboratory (including preparation of materials); personal preparation for lectures, recitations and laboratory work; reading of quiz or theme papers; interviews with students; administration and official correspondence; committee and faculty meetings; private research; experiment station work; reading and study to keep abreast of one's subject; extension and field work, and other duties. The figures were not in in time to be published in this issue of the weekly, but so far as they were available they indicate that instead of ten hours a week, the average was nearer sixty for each professor, devoted to lines of work necessary for him to engage in in connection with his position on the staff of instruction."

The Supreme Court of Arkansas has just declared unconstitutional the act of the legislature appropriating $50,000 of the common-school fund for the use of high schools. This law has been in effect for several years and under its provision the number of students enrolled in the high schools has almost quadrupled. The decision of the court was based on the fact that the constitution requires that the common-school fund be distributed alike to all of the public schools of the state, while the law giving $50,000 to the high schools made this money available for certain particular classes only. It is probable that the next legislature will be asked to pass a new law providing that the appropriation be made from the general revenue fund.

Governor Hammond, of Minnesota, signed recently the teachers' pension bill. Under its provisions teachers may retire after twenty years' service on an annual pension. The fund for this purpose is provided by assessment of each teacher and a special state tax.

Appropriation for two new buildings to meet the needs of the Ohio State University and for additional tracts of farm land for the department of agriculture has been voted through the finance committee of the legislature. These extensions would involve an expenditure of $340,000. A domestic science building to cost $150,000 and a shop building for manual training to cost $120,000, are provided. Ninety acres of land would be purchased west of the Olentangy River at a probable cost of $70,000. Plans for the domestic science building have been completed by Professor Joseph N. Bradford, university architect. The building will be three stories and the domestic science departments of other universities, to whom the plans have been submitted, have pronounced the plans more com-

plete and up-to-date than any other such building now in use in the United States, according to Edna M. White, of the department of home economics. One of the features of the new building will be a model flat, consisting of dining-room, living-room, study-room, kitchen, two bedrooms and a laundry. This flat will be on the third floor, which will also contain a 45-foot dining-room, reception rooms and retiring-room for the accommodation of delegates visiting the university. Plans for the shop building are not completed, but it will be strictly of the factory type, skeleton in construction, with walls of glass.

DISCUSSION AND CORRESPONDENCE

HOME GARDENS AND THE SCHOOL

HOME gardens encouraged and supervised by the public school can be made a success. We have no doubt about it after a rather successful trial during the spring of 1915. Children are interested in this work and parents are willing and anxious to encourage it. Hard-headed business men see value in it and are willing to help finance the movement.

The experiment, an account of which is given below, was tried in connection with the work in one of our ward buildings. The work was done under the direct supervision of the principal of the buildings. The assistance and cooperation of the Parent-Teacher Association and the Commercial Club of the city were big factors in the development and success of the scheme.

After extensive reading, some discussion, and rather definite planning, the matter was presented to the Parent-Teacher Association at one of the regular meetings in the form of a resolution and was adopted. A short time after this it was taken before the Commercial Club of the city for their consideration and with the idea that they give their moral support and if possible encourage the work by offering prizes for the best gardens. The response was immediate. A committee was appointed to cooperate with the school in making the garden movement a success. The daily papers gave space for discussion and gave encouragement in all ways they could.

The people in general were favorable. The financial side appealed to many while the educational value was recognized by some. The teaching force as a unit saw the value and responded admirably. What success was achieved was due largely to the unified effort on the part of practically all the community.

Talks were made to the pupils by a practical gardener, informing them what, how and when to plant, and how to cultivate the ground. Government seeds were secured from our postmaster and the congressman from our city. After the gardens were planted the principal visited over 100 of them, criticizing and making suggestions concerning the work. Owing to press of work it was impossible to visit and check the remainder. Record was made of each one visited. This included name of child, age, grade, size of garden, location, soil, crop and condition of garden.

The first week in June three judges representing, respectively, the board of education, the Parent-Teacher Association and the Commercial Club visited the different gardens and selected the ones deserving prizes. The judges scored the gardens on the following points: location, 10 points; individual preparation, 10 points; arrangement, 10 points; size of garden, 10 points; cultivation, 25 points; quality of crop, 25 points.

Blanks were sent out asking the parents to give the value of the produce raised by the children and used by family or sold. The idea was to get some sort of an estimate of the amount of work done and the financial value of these home gardens. On totaling the estimated worth of these gardens it was found that the total value was $1,008.80. The estimated value of the different products was: radishes, $193.27; onions, $176.59; beans, $150.20; lettuce, $183.14; beets, $81.50, all other products, $224.10.

The average size of these gardens is 10 feet by 12 feet or 120 sq. ft. The average value of the 208 gardens was $4.85. Plans are now formulated for an exhibition of garden products in the fall.

The general opinion among parents and teachers is that the home garden encouraged and supervised by the school is worth while for the following reasons:

1. It is of financial aid to the families and to the community. It furnishes fresh vegetables for the table.

2. It gives employment to the children and awakens interest in the products of the soil.

3. It secures cooperation of patrons and affords the chance for a better understanding between home and school.

4. It arouses interest and secures cooperation of business men of the community.

5. It creates an interest in lawns and backyards and creates a desire to keep them clean and free from weeds.

G. W. Gayler

Canton, Ill.

QUOTATIONS

INCREASED TUITION FEES IN COLLEGES AND UNIVERSITIES

The cost of higher education is increasing. Almost every large university in America has increased its tuition charges within the last five years, and according to those who should know the end is not yet. Five great eastern universities—Harvard, Yale, Princeton, Columbia and Cornell—have found it necessary to raise their tuition rates recently. The big state universities of the west and middle west as well as the smaller colleges have made proportionate increases.

The reasons set forth most frequently are that the cost of higher education must be made to keep up with the increased cost of living; that the wisdom of paying salaries more nearly equal to what the earning capacity of the professors would be in other lines of endeavor is becoming more apparent; that at best the student is but a beneficiary and it is only logical that he should bear a greater share of the burden.

It has been suggested further that in recent years endowments to established universities for general maintenance have been fewer and that it has not only been thought wise, but it became absolutely necessary not to depend longer on such endowments to cover the increased cost of running the institutions. Those who have given money recently have preferred for the most part to give it for specific purposes, such as new buildings, which after all only add to the cost of maintaining the university.

The Harvard corporation on April 26 last voted to increase the tuition from $150 to $200 for all students in Harvard College, the graduate school of arts and sciences, the graduate school of business administration, the school of architecture and landscape architecture and the Bussey Institution with the school of forestry. This increase does not apply to the medical school, the divinity school or the law school. The increase is to become effective with the classes entering in September, 1916.

The tuition for Harvard students taking courses in mechanical, electrical, civil and sanitary engineering, mining and metallurgy, also research in the different branches of applied science, was increased from $150 to $250 when the Massachusetts Institute of Technology and Harvard agreed to cooperate early last year. This increase applies to all students entering these courses subsequent to the agreement.

Up to the college year 1913–14 the tuition in Yale College was $155 a year for three years and $165 for the senior year. In 1913–14 the yearly tuition remained the same, but $18 instead of $10 was added for the senior year. Then for 1914–15 the tuition was raised to $160 and the senior charge was again made $10 additional.

In the Sheffield Scientific School at Yale the tuition was formerly $150 plus $6 laboratory and library charges. In 1914–15 the tuition was raised to $180 plus $10.50 laboratory and library charges. The tuition in the graduate school at Yale, formerly $100, was raised to $125 for the year 1914–15. The tuition in the medical school and in the law school remains at $150 and the tuition in the school of forestry remains at $125.

At Princeton University, where there has been no tuition increase for five years, it has been announced that beginning with the class entering this fall the tuition will be increased $15, a change from $160 to $175.

Cornell University has increased her tuition fees in three departments, the increases going into effect last fall. The tuition in the colleges of arts and sciences, law and veterinary surgery was raised from $100 to $125. The tuition in other departments remains the same, but in the colleges of mechanical and civil engineering a laboratory fee of $25 was added to the regular tuition of $150 when the other changes were made.

At Columbia University a different system of charging is in vogue. There the charge has been raised from $5 to $6 a point. The average number of points taken by a student in each year is thirty-one, so the average increase is $31 a year, a change from $155 to $186.

In the following table there are shown twenty universities and colleges that have increased their tuition charges within the last five years. In the case of universities the tuition shown in the table applies only to the college of arts and sciences, the regular college course. The information was obtained in most cases directly from the institutions listed. In a few instances the catalogues for 1910 and 1915 were compared or the data were taken from reliable statistics. The table shows an average increase of $25 for each of the twenty institutions listed.

The table might easily have been extended and still by far the largest percentage of the privately endowed institutions of learning in the United States would have shown substantial increases in the cost of tuition. In some cases the increase does not really appear, as it has been added in the form of extra fees.

College or University	Tuition In 1910	Tuition In 1915
Harvard	$150	$200
Yale	155	160
Princeton	160	175
Columbia	155	186
Cornell	100	125
Williams	140	150
Amherst	110	140
Union	50	60
Vanderbilt	160	165
Adelphi	180	190
Bowdoin	75	125
Colgate	60	80
Dartmouth	125	140
Rensselaer Polytechnic	200	230
Fordham	100	125
Haverford	150	170
Oberlin	75	100
Washington and Jefferson	60	120
Wellesley	175	200
Wesleyan	85	140

—New York *Sun*.

PROMOTIONS WITHOUT EXAMINATIONS

"FEW schools now rely entirely upon examinations as a test for promotion," declares W. S. Deffenbaugh, chief of the division of school administration of the U. S. Bureau of Education, in his annual review of school conditions in the smaller cities. "In some schools examinations are made to count one half, while in others they count only one fourth. It is now recognized that examinations are not true tests of the pupil's ability to do the next grade's work, and that a pupil should not be promoted on what he knows, but on what he can do. Of 756 superintendents in the smaller cities reporting, 669 say that they are now depending on examinations much less than formerly."

How pupils shall be classified so that they may advance through the grades without loss of time is a question that is continually presenting itself to thoughtful superintendents, according to Mr. Deffenbaugh, and some cities are undertaking special experiments in this field.

In Carthage, N. Y., all those children who can not read are started on their educational journey in much the same way. Gradually they are regrouped into three divisions: The first, composed of the most mature and most capable, completes a certain amount of work in one year; the next group is given one and one half years in which to accomplish the same amount, and the third two years. Before the close of the first year each of the three groups is likely to be divided again into the higher and lower. Therefore each pupil who enters in the fall with no knowledge of the books has before him the possibility of being in any one of six groups before the close of the first year. There is a special teacher in the lower grades

who devotes her entire time to misfits—those pupils who for some reason or other can not do all of their work to the best advantage in any of the regular groups. This teacher coaches backward pupils and helps the brilliant ones to jump to the next higher division.

In East Chicago, Ind., a child is promoted at any time the teacher and supervisors feel he would be benefited. The plan is to pass pupils if they are doing their best, even if the grades are low.

The superintendent of schools in Williamsburg, Va., reports: "We use the shifting group plan of grading pupils and a form of reports to parents that keep parents thoroughly informed as to the pupil's standing during the year. As each weakness of a pupil is discovered by the teacher, it becomes a matter of special consideration and study by teacher, parents, principal and the pupil. Tentative shifts can be made at any time. The aim is to relieve the teacher of all red tape and to reduce routine to the minimum, but to insist upon a constant and sympathetic study of the child—every child—but particularly every child who is in danger of falling behind his class. No percentages or grades are accepted from a teacher as excuses for promotion or demotion. If a pupil is weak, efforts are made to ascertain the exact nature of his weakness early in the term and remedy it."

EDUCATIONAL RESEARCH AND STATISTICS

MEASUREMENT OF EIGHTH GRADE COMPOSITION

The following study deals with two problems: First, to obtain a general estimate of the ability in composition of the pupils in the eighth grade of a public-school system, and secondly, to compare the quality of eighth-grade compositions written under the same conditions at an interval of three years.

The study is based upon compositions written by all members of the eighth grade in the public schools of Hackensack, N. J., of which the writer is superintendent. The first series of papers, 133 in number, was written in December, 1911, the second series of 156 papers, in December, 1914. The writer has had the assistance, in rating the papers, of several teachers of English in the eighth grade and the high school.[1]

At the end of the year 1911–12, all seventh- and eighth-grade classes were transferred from the four separate ward schools to a central school. Since that time, all subjects have been taught by departmental teachers, and pupils have been grouped in three distinct courses: academic, commercial and manual arts. With this differentiation of courses, there has been a tendency to be more liberal in promotions, and to retain over-age pupils longer in school. It is probable that a slightly wider range of native ability is represented in the 1914 class than in the 1911 class.

CHARACTER OF THE TEST

In planning the test, the chief consideration was to assign a subject which would, as nearly as possible, give all pupils an equal chance. Following are the directions given to the teachers who gave the test to their own classes:

Have white paper distributed. Give the following directions, taking care to have the attention of all members of the class. Do not repeat or add to the directions. Answer no questions:

"You are to have the next fifteen minutes for writing a composition. Do not write more than one page. The subject is, 'A Day of my Life.' (Write subject on board.) Think the subject over before beginning to write and choose a day of which you can give an interesting account in the limits of time (15 minutes) and space (one page)."

The subject proved to be not entirely satisfactory. In spite of the directions to choose a day with reference to the possibility of giving an "interesting account," many pupils apparently chose days which they remembered with particular pleasure, and gave rather colorless journals, in minute detail, of their doings from morning till night. This weakness is of course an indication of deficiencies in ability

[1] Gertrude Anderson, Nellie E. Bitz, W. E. Buckley, Louise Comes, Elvin H. Fishback, Mary E. Hardie, Martha M. Hazen, Jessie F. Maclay, Elman M. Massee, Vida Myers, Eleanor P. Stark.

in selection and arrangement of ideas, and in ability to use language effectively from the standpoint of interest, but it is probable that some other topic would have afforded rather more stimulus to the imagination and less suggestion leading to a chronological record of details.

RATING THE PAPERS

The 1911 set of papers had been rated soon after they were written, by two high-school teachers, each of whom ranked the papers separately for accuracy of form and freedom of expression. The method of ranking was to read a composition and place it with other papers previously read which in the judgment of the reader possessed the same degree of merit. In this way, one of the readers was able to distinguish six degrees of merit in freedom of expression and seven in form. The other grouped the papers in six grades of freedom of expression and four of form.

After the 1914 compositions had been written, a little preliminary work was done with the Harvard-Newton and Hillegas scales, but the first trials showed so much variation between the ratings of two readers and between two independent ratings by the same reader, that the use of these scales was abandoned for the time.

The chief difficulty in using the scales seemed to be that the character of the material in the scale samples was so different from that of the compositions to be measured that the reader was often uncertain as to which of three or four steps should be regarded as representative of the merit of a given composition. It was thought that if samples taken from the compositions to be measured and representing different degrees of merit were used as standards, the papers could be compared with a greater degree of confidence than by the use of a scale with carefully evaluated steps but dissimilar subject matter.

SELECTION OF STANDARD SAMPLES

Accordingly, six specimens were selected from the 1911 series which in the judgment of five teachers represented different degrees of merit. In making the selection, two teachers independently grouped the papers according to general merit. These results were studied in connection with the rankings made by two teachers in 1911 as explained above. The aim was to select as standards compositions in regard to which there was such general agreement among the judges that, in the opinion of four out of five, a given sample was better than the next inferior one and poorer than the next superior standard. The following six compositions fulfil this condition very nearly.

Sample No. 1.

A Day of My Life

One day, while we were away at the mountains, we started in the early morning on a fishing trip. It was quite cloudy, and we expected that it would rain any minute.

When we were out in the middle of the lake, about a mile from the landing, a terrible thunderstorm came up. We were terribly frightened and started for the shore. The rain came down in torrents and we were soaking wet. The water began to splash into the boat and the lake was covered with white-caps. The boat began to rock very hard and we were afraid it would go over. At last we reached shore, wet and frightened. We went up to the hotel and found that the people were very much worried for fear we had had something happen to us.

Sample No. 2.

A Day of My Life

For about one year I was secretary of a small sewing club, in which we made many useful things. One day we held a fair in Mattjetscheck's new grocery store.

At this fair we had only a few booths consisting of a cake booth, candy booth, and the fancy booth. There were also grab bags. We all assisted in decorating it up the day before.

At our fair we sold all the things which we made in the Club and also donated articles. Each girl made extra things to bring. I was chairman of the fancy booth, at which we made twenty-four dollars. All the other booths made a great deal and we sold everything we had.

We made over Eighty-four dollars, all of which was given to Miss Fisher, the visiting nurse of Hackensack. Miss Fisher told us that she knew of a good use for the money. We all asked what she should use it for and she told us she would help all the poor and needy families, and we all went home happy that we had done so much good.

Sample No. 3.

A Day of My Life

One day this summer we planned to have a picnic. We got up early in the morning and bought ice, food, meat, pots, kettles, and other supplies.

Then about nine-o-clock we started out in a motor-boat and sailed five miles and then we land.

The place we selected for the picnic was a broad beach with a creek flowing on one side and Buzzard's Bay on the other, and about fifty feet away was a grove of pine trees.

We cooked our lunch in the grove and then went along the beach and wente in bathing.

We went fishing and caught some good fish and then as it was growing dark we started for the hotel, and in twenty minutes we were home.

Sample No. 4.

A Day of My Life

I got up eight oclock in the morning got dressed and ate my breakfast at half past eight. I walked around the house for an hour or so then I took a stroll.

I walked up to the first platform of the Citatinny mountains. Then I took a rest for five minutes and then I started for the second platform, on my way I picked all kinds of flowers, and it took me twenty five minutes to get to the second platform. By the time I got up to the top of the mountian it was one o'clock so I ate some sandwitches and stayed around the cottage on the top of the mountain until two oclock then I started to walk down again.

When I reached the second platform I met my mother and some other ladies, and my mother asked me where I was for dinner. I told her and we all walked down to the first platform and took a rest. Then we walked down to the hotel. We ate our supper which was waiting for use, and after supper we all played games and it was twelve oclock before we got to bed.

Sample No. 5.

A Day of My Life

One day when I got up, my father told me that he had some work for me. I did not say anything, but started to work at once. The work lasted till noon. Then I ate my dinner and my mother said she had something nice to tell me. I was very glad to hear what she said, first she said go and get dressed, and then I will tell you. I did so, when I was ready she said, Ida is going to take you over to the park. I was tickle to death To hear this. So she came and took me over to the park, we had a grand time there, and came home after dark.

Sample No. 6.

A Day of My Life

The day of my Life, was on my birthday, at 7 oclock I went up toun; 8 oclock I came home.

Them I went right up to the door, and walk right in there was a lot of boys and girls their they yealed, supprise we play games, and at 11 oclock we went home every one was happy.

Subsequent ranking of the six samples by several other teachers showed that there is considerable difference of opinion as to the relative merits of samples No. 1 and No. 2. The difference between these two is apparently less than between any other two consecutive standards. Evaluated by five persons, in terms of the Hillegas scale, the samples show the following values:

No. of Sample	Ratings by					Average
	A	*B*	*C*	*D*	*E*	
1	725	725	775	770	750	749
2	675	700	800	740	725	728
3	630	595	500	725	700	630
4	450	585	300	700	555	518
5	369	480	400	450	525	445
6	260	350	183	325	200	263

QUALITY OF THE 1911 COMPOSITIONS AS A WHOLE

The full set of 1911 papers was rated in terms of the six standard specimens by the author and two teachers of English in grades VII. and VIII. The results are given in the following table, the three judges being designated by the letters *A*, *B* and *C*.

RATING OF 1911 COMPOSITIONS IN TERMS OF SIX STANDARD SPECIMENS

Standard	Per Cent. of Papers in Each Standard				
	A	*B*	*C*	*A* and *B* Combined	*A*, *B* and *C* Combined
1	5.3	3.8	12.0	4.5	7.0
2	11.3	12.0	33.1	11.7	18.8
3	21.8	38.3	33.1	30.0	31.1
4	38.3	33.9	13.5	36.1	28.6
5	17.3	9.0	6.8	13.2	11.0
6	6.0	3.0	1.5	4.5	3.5
Average value in terms of Hillegas scale.....	550	581	644	566	592

It will be seen that in comparison with the standard samples, *A* gives the set of papers the lowest rating, and *C* the highest; the difference between the judgments of *C* and *B* being considerably greater than between those of *A* and *B*. Giving the standard samples values in terms of the Hillegas scale as obtained by the judgments of five teachers (see page 210), *A's* ratings give an average value of 550 to the whole set of papers; *B's* 581 and *C's* 644. The combined judgments of *A* and *B* give an average value of 566, and the combined judgments of all three, 592.

VARIATION IN THE RATINGS OF INDIVIDUAL COMPOSITIONS BY DIFFERENT JUDGES

The variation in the rankings of individual papers was, of course, much greater than in the evaluation of the whole set. Of the 127 papers (omitting from the full set of 133, the six papers chosen as standards), 12 were given the same rating by all three judges, 78 were ranked the same by two, and 37 received three different ranks. In this group of 37, the three ratings were consecutive—2, 3, 4; 4, 5, 6, etc.—except in 13 cases. Two papers were placed in the highest rank by one judge and in the lowest by another.

Following are examples of papers in the rating of which all three judges agreed.

COMPOSITION ASSIGNED RANK 1 BY ALL THREE JUDGES

A Day of My Life

I was a small boy. It was a cold wintry day in December and I was going to visit my grandparents who lived on a large farm about three miles distant from the farm owned by my father. The sky was cloudy and it soon began to snow. I trudged onward and soon entered a wood where the snow did not fall so heavily. After I had again come out of the wood the snow was falling more heavily than before and I could see but ten yards in front of me through the white gloom. The snow was about a foot and a half thick and I soon grew very weary and sleepy. When I was a mile from my destination I thought I would lie down and have a rest. When I awoke I found myself being in bed and my grandmother anxiously waiting for me to awake. I had been picked up by my grandfather who had been coming to meet me.

COMPOSITION ASSIGNED RANK 2 BY ALL THREE JUDGES

A day of my Life

One day a few summers ago, my mother, a girl friend and myself all went to the seashore.

We arrived there at 11 A.M. and after eating luncheon and enjoying a large number of the amusements, us girls decided to go in bathing while my mother sat on the pier and watched us. We secured a bath house and then went in. The water was at just a nice temperature, and we enjoyed it very much.

Up to this time I did not know how to swim. As my friend did she decided to teach me. She then told me to lend myself to the water and said that she would hold me, which she did. But instead of holding me head above water, I must have let it down for the next I knew I was underneath the water. I felt sure I had swallowed most of the ocean, and came up with my ears, nose, eyes, and mouth full of water. This gradually dried and I felt much better. My friend then said, "Will you try again, Jessie?" I answered very quickly and said, "No, thank you, I think I have had enough for to-day." Later on I learned to swim, but I shall never forget that day.

COMPOSITION ASSIGNED RANK 3 BY ALL THREE JUDGES

A Day of My Life

Some time ago I was at a Lake called Waurumaug and it was the day of the regatta.

My Cousin and I were entered in the tub-race and I in the swimming race.

We went over to the dock where it was to be held about an hour after lunch and we found it crowded with contestants and spectators.

There were several events such as, the canoe race, the rowing race, the girls races among which were swimming and canoeing, and the mens obstacle canoe race and tilting contest.

At last came the tub race which was a lot of fun as we kept tipping over finally a friend of ours won.

The swimming race came next and I had fifteen seconds handicap on the older fellows. There were about twenty fellows in this and I was youngest fellow there but I finished fourth.

COMPOSITION ASSIGNED RANK 4 BY ALL THREE JUDGES

A day of my Life

A few months ago I was invited to a surprise party. I had a very pleasant time especially when the person to be surprised came into the room.

We all jumped up and cried, "surprised." All during the afternoon we played games and other enjoyments which are played at parties. Then around six o'clock we had refreshments. We played a few more games until it was time to go home, then we all said "good night," and went home to bed to dream over the good time we had.

The following paper was ranked 1 by *C*, 3 by *A*, and 6 by *B*.

A day of my Life

During my visit in the Catskill Mts, I had a very pleasant, but tirsome experience. Getting up at the usal time (5 A.M.) my father suggested we take a journey through the river valley.

My father, brother, and myself were to go. Mother fixes us a very nice lunch and we started off up the road enjoying the scenery as we walked. (for we were on top of the mts.)

At last we came to the right path which took us down the mts. Going down we had to look out, for this path was quite steep. Several times we lost the path but we soon found it.

The river we were following to the source was the Haines River which enters into the Hudson at Catskill. Well, what a time we did have climbing up the small falls. Several times we went in swimming, for it was hot. Soon we came to a place my father thought he knew so, as it was getting dark he thought we had better be getting home, so we climbing up the place and

Twenty-seven of the 1914 papers were read by the same three teachers and by four others, including one teacher of English in the high school. The ratings are shown in the following table:

VARIATION IN RATINGS OF COMPOSITIONS BY SEVEN TEACHERS OF ENGLISH

No. of Composition	Ratings by the Seven Judges							Av. in Terms of Hillegas Scale	
	A	*B*	*C*	*D*	*E*	*F*	*G*	6 Judges, *A*, *B*, *D*, *E*, *F*, *G*	2 Judges, *A* and *B*
1	4	5	2	4	5	5	5	469	482
2	4	3	2	3	2	3	4	609	574
4	4	4	4	5	3	5	5	500	518
6	4	4	4	5	4	4	5	494	518
7	5	6	5	5	6	6	6	324	354
8	5	6	5	6	6	6	6	293	354
9	5	5	4	5	6	5	5	415	445
10	6	6	5	6	6	6	6	263	263
11	6	5	5	6	5	6	5	354	354
12	5	5	3	5	4	6	5	427	445
13	4	3	2	4	3	4	3	574	574
14	4	3	2	4	3	5	5	531	574
15	5	6	3	5	5	5	5	415	354
16	4	3	3	5	3	4	5	531	574
17	5	5	2	5	4	4	4	482	445
18	3	2	1	3	4	2	4	625	679
19	6	6	5	5	6	6	6	293	263
20	6	4	3	5	6	5	6	366	391
21	5	5	4	5	5	6	5	415	445
22	5	5	3	5	5	5	5	445	445
23	5	6	4	5	5	6	5	384	354
24	4	5	4	4	3	5	2	547	482
26	1	2	5	1	2	1	3	722	739
27	2	3	2	3	2	3	2	679	679
28	4	3	4	5	4	5	5	500	574
29	3	3	3	3	3	2	4	628	630
30	3	4	2	4	3	4	3	574	574
Average ratings in terms of Hillegas scale	485	484	590	477	497	451	464	476	485

It is quite apparent that the judgment of *C* differs markedly from that of the other judges. She tends to rate the papers higher, her average rating being 20 per cent. higher than the average rating of the seven judges. In a num-

ber of cases her estimates differ by two steps from those of any of the other judges, and in one case she assigns to fifth rank a paper which three of the judges place in the first and two others in the second.

On the other hand, *A* and *B* differ from each other by no more than a single step except in one of the twenty-seven papers where the difference is two steps. When the ranks are evaluated in terms of the Hillegas scale (see page 9), the values of the individual papers based on the averages of the rankings by *A* and *B* differ from the averages of the estimates of six judges by less than one step in every case, and by very much less in nearly all cases. The average value of the twenty-seven papers as rated by *A* is the same as that by *B* and differs from the average of the six estimates by less than 2 per cent. Therefore, in comparing the two sets of papers, the average of the estimates made by *A* and *B* is likely to give a close approximation to the combined judgment of a larger number of judges, unless their ideas of merit in eighth grade compositions should differ considerably from those held by the six teachers who rated the twenty-seven specimens.

Omitting the ratings of *C*, two papers, No. 10 and No. 22, are assigned the same rank by all six judges. Five of the six agree upon the rank of five papers, Nos. 8, 9, 15, 19, 21, and the sixth judge differs from the others in all these cases by only one step. In twenty-three of the twenty-seven papers, at least five of the judges differed from each other by no more than one step. Following are examples of papers upon which the judges agreed closely.

SAMPLE NO. 10, GIVEN RANK 6 BY ALL SIX JUDGES

A day of my life

Down in Virginia about five years ago, on a Saturday my cousins and I was left a lone at home, while auntie and her husband went to Boydton to do, shoping as she live in what they called the "Big Woods." For it wasn't but fust a little country store. Their cow had a little calf and it looked like it was going to come up a thunder storm. So we thought would put the cow up, then get the calf in. We tied the cow in the barn and went to get the calf she holler and the cow broke a lose and came after me I ran down and

SAMPLE NO. 22, GIVEN RANK 5 BY ALL SIX JUDGES

A Day of My Life

I went to Englewood Sunday, Dec. 13, and when I got there it began to snow and I thought to myself how foolish I were to come from my own town Hackensack and go to Englewood in the snow, and rain, but after meeting some of my friends they asked me if I would like to go up to the theatre in Englewood, and I thought it very strange for a theater to be open in Englewood on Sunday, but when I got there I saw moving picture of early days in the time of Christ and they were very interesting. The congregation that were there sang many psalms and a man spoke on the subject of Christmas time how we could give

SAMPLE NO. 6, GIVEN FOURTH RANK BY FOUR JUDGES AND FIFTH RANK BY THE OTHER TWO

A day of my life

One morning I got up about half past six in the morning, this was in the country on my vacation and I helped the working men feed the chickens, give them water and, fill the hoppers with charcoal, oyster-shells, grit, bran, middlings, alfalfa and some other things concerning chickens,

Around noon time the men all got to-gether and opened a small pond, and let the water run out of it, and then get the ground out of it for fertilizer, and dug it out also to make it deeper and to take out all the bogs and things that were unnecessary to be in there.

We let the water run out from noon time—until it ran all out, and that was about seven o'clock the next night.

That same night the men and some other boys and I went down to the pond to see that every thing was all right. We had two lanterns with us because it was rather dark, and when we reached the pond I thought I saw an eel squirming around by the outlet and I grabed it, and found out it had scales on it, and I let go again, and the men and boys all said in a chorus to me "Now, you let a nice big

SAMPLE NO. 29, GIVEN THIRD RANK BY FOUR JUDGES, SECOND BY ONE, AND FOURTH BY ANOTHER

A Day of My Life

One Saturday morning Dad called me rather earlier than usual and I didn't see why but I later found out that he was going to take me to the city with him. He and I went down about 9.30 oclock. When we got there he took me to the Art Museum. Then it was near lunch time so we went to the restaurant and had our dinner.

Dad had purchased the day before to tickets for the football game so at 2 oclock we went up

to the polo grounds and saw Yale and Harvard clash on the gridiron. It was a fine game and at half past five Yale won amid great yells.

We decided to come home then and so we took the six thirty train home and reached home about seven thirty oclock.

SAMPLE NO. 26, GIVEN FIRST RANK BY THREE JUDGES, SECOND BY TWO, AND THIRD BY ONE

A Day of My Life

The shore of the Sound is one of the best places for children to spend the summer. Several years ago I spent four weeks in a small, one-horse, Connecticut village composed of some sixty houses along the shore. Three miles to the nearest town and nothing but simple cottages and open fields about one makes a very delightful place to live in, with no noise or stir about save the sound of the surf and waves. I think that I enjoyed that summer more than any I have since spent and I can truly say that I would like to spend each vacation there. We

The greatest variation in judgment was shown in rating paper No. 24, which is given below.

SAMPLE NO. 24, GIVEN RANK FOUR BY THREE JUDGES, RANK FIVE BY TWO, RANK THREE BY ONE, AND RANK TWO BY ONE

A Day of My Life

I arose at seven o'clock one fine morning in September, the birds were singing merrily and I felt strong and ready for work.

At seven fifteen I had my breakfast, and in a few minutes later I was out doing my work for the morning. After spending about a quarter of an hour at work, I went into the house to practice my 'cello lesson, at eight thirty I left for school.

At nine o'clock I had my first recitation and I certainly was glad that I had not failed the hours soon passed and school was out and I certainly had made a good effort toward learning my lesson the previous night.

At four o'clock I took my music lesson and I had a pretty good lesson at that. As soon as I was finished I went out for a half hour for a little enjoyment.

At five o'clock I came in and began my school lessons and I studied until six thirty.

I thought to myself, as I finished my school lessons, that if I do like this every day I would not worry about my school lessons or if I had time to play or not.

QUALITY OF THE 1914 PAPERS AS A WHOLE

The whole set of 156 compositions of 1914 was rated by the same three judges, *A*, *B* and *C*, and also by *G*, a high-school teacher of English. Following are the results:

RATING OF 1914 COMPOSITIONS IN TERMS OF SIX STANDARD SPECIMENS

Standard	Per Cent. of Papers in Each Standard						
	A	*B*	*C*	*G*	*A* and *B* Combined	*A*, *B*, *C* Combined	*A*, *B*, *C*, *G* Combined
1	9.6	3.5	12.8	8.3	6.5	8.6	8.5
2	16.0	12.9	35.2	4.5	14.4	21.4	17.2
3	18.6	43.2	24.3	22.4	30.9	28.7	27.1
4	38.5	27.7	20.6	38.5	33.1	28.9	31.3
5	14.7	9.0	6.4	22.4	11.9	10.0	13.1
6	2.6	3.9	.7	3.9	3.2	2.4	2.8
Average value in terms of Hillegas scale	577	584	643	546	580	601	588

COMPARISON OF THE TWO SETS OF COMPOSITIONS

Comparing the figures given in the foregoing table with the corresponding table on page 210, we see that similar differences of standard among the judges appear in both. Thus *C* places about three fourths of the papers in the first three ranks, *B* makes the third group the largest, while *A* makes the fourth largest. The average rating given by *A* is still slightly lower than that of *B*, and *C*'s average is much larger than either. *G* did not rate the 1911 papers, but his estimate for the 1914 set is lower than any of the other three, as it is in the rating of the twenty-seven samples (see page 212).

Only one of the three judges finds any appreciable difference in value between the two sets—an improvement of about 5 per cent. The most reliable comparison which we can make between the two complete sets of papers would seem to be a comparison of the averages of the measurements made by *A* and *B*. For 1911 this average was 566; for 1914, 580—a difference too small to be of much significance.

CONCLUSION

We undertook to solve two problems: first, to estimate the ability in composition of an

eighth-grade class and, secondly, to compare the ability of eighth-grade pupils at two different times.

In regard to the first problem, we can say that in the opinion of two teachers whose judgment agrees closely with four others, about 6 per cent. of the eighth-grade pupils in 1914 were able to write, in 15 minutes, a composition, on the subject "A Day of My Life," as good as sample No. 1 (page 209); about 15 per cent. were able to write as well as sample No. 2 (page 209); about 31 per cent. as well as sample No. 3 (page 210); about 33 per cent. as well as sample No. 4 (page 210); about 12 per cent. as well as sample No. 5 (page 210), and about 3 per cent. as well as sample No. 6 (page 210). We can say that the average ability of the pupils of the grade, as measured by such a composition, lies about half way between the ability required to produce sample No. 3, and that needed for sample No. 4, or about 580 on the Hillegas scale.

In regard to the second problem, our study indicates that the quality of the two sets of compositions is about the same, with possibly a very slight improvement in the later papers. The general impression made upon both judges who rated the two full sets of papers was that the 1914 compositions showed an appreciable gain in originality and freedom of expression, with perhaps some loss in mechanical form.

Certain tentative conclusions in regard to the value of this method of attempting to evaluate and to compare ability in English composition may be suggested.

1. There is no certainty that a person will not disagree radically with others in his estimate of the value of a set of papers, even if compositions written on the same subject and under the same conditions are used as standards. On the other hand, our study would suggest that most teachers who have had experience in teaching children of the age tested will not differ very widely in their estimate of a whole set of papers.

2. Each judge tends to maintain his own standard in rating different sets of papers, in comparison with selected samples, that is, the judge who rates one set of papers below the average value obtained by several readers will tend also to rate another set below the average. It would probably be possible to determine the peculiarities of standard of an individual teacher by comparing his ratings of say twenty-five papers with the ratings of the same papers by several judges. Such a comparison of ratings could be used also to correct wide variations and obtain a more uniform standard among a group of teachers.

3. Rating of an individual paper by an individual judge should be used with caution.

To rate a large number of papers requires much time and is a tedious process. I have been interested, therefore, to see whether a valuable estimate could be obtained by choosing twenty-five papers at random. The following table shows the ratings by three judges of twenty-five papers chosen at random from each of the two sets. The selection was made by arranging the papers in the alphabetical order of the names of the pupils and then taking the first twenty-five. The table shows also the results obtained by the three judges by reading the complete sets of papers.

Judge	1911 Set		1914 Set	
	Average 25 Papers	Average 133 Papers	Average 25 Papers	Average 156 Papers
A	548	550	603	577
B	542	581	614	584
C	634	643	645	644
Average	575	591	621	602

The difference in value of each set of papers as obtained by the two methods is too small to be of much significance. The same conclusion which has been drawn from the comparison of the full set of papers is suggested by the average scores of 25 of each, namely, that the difference is very slight, whatever advantage there may be belonging to the papers written in 1914.

As a test of the constancy of the judgment of an individual, the fifty papers were rated by *A* a second time. The results (average score) for the two trials were almost identical —548 and 560 for the 1911 papers, and 603 and 598 for the 1914 set. This confirms the con-

clusion previously stated, namely, that each judge tends to maintain his own standard, however much it may differ from that of others.

The foregoing study is reported, not as having any great scientific value, but as an effort to attack a practical school problem. I hope that it may elicit suggestions as to a more reliable, and at the same time practical, means of comparing ability in composition of two classes or of the same class at different periods.

WILLIAM E. STARK

HACKENSACK, N. J.

SOCIETIES AND MEETINGS

THE SECTION OF EDUCATION OF THE AMERICAN ASSOCIATION FOR THE ADVANCEMENT OF SCIENCE

THE American Association is this week holding a meeting in California. Professor Elwood P. Cubberley, of Stanford University, is chairman, and Stuart A. Courtis, of Detroit, is secretary of the section of education. The program is as follows:

Tuesday, August 3, 10 A.M.

Joint Session of Section H, Section L, and the American Psychological Association

General Subject for the Morning.—"Mental Tests and their Pedagogical Significance."

Place of Meeting.—Architecture Building, University of California.

"Some Recent Developments in the Testing of Intelligence," by Louis N. Terman, Stanford University.

"Test upon Students of Reed College with Reference to Marks in Their Courses," by Elenor Rowland, Reed College, Portland.

"Tests for Prospective Students of Stenography," by LeRoy W. Fike, University of California. (Introduced by Warner Brown.)

"Results of Tests with Specific Cases, with Emphasis on the Study of the Delinquent Type," by Grace M. Fernald, State Normal School, Los Angeles.

"The Practical Value of Mental Tests in Juvenile Court Work," by Olga L. Bridgman, University of California.

"Work at Sonoma State Board for Feeble Minded," by Kate Brousseaux, Mills College.

"Various Degrees of Success in Public-school Training of Mental Defectives," by Mrs. V. C. Hicks, Board of Education, Oakland.

"Age Norms of Psycho-motor Capacity," by J. E. W. Wallin, Psycho-educational Clinic, St. Louis.

Tuesday, August 3, 2 P.M.

Section L

General Subject for the Afternoon.—"Scientific Study of Educational Problems."

"Elements in the Teaching of Writing," by William Kent, Montclair, N. J.

"Reed College System of Scientific Grading and Credit for Quality," by William T. Foster, Reed College, Portland, Oregon.

"The Human Speech Sounds," by Charles T. Luthy, Peoria, Ills.

"Management of the Speech Defect Problem in the Public Schools," by Walter B. Swift, Boston, Mass.

"Measuring Progress in Latin," by Paul H. Hanus, Harvard University.

"Principals' Study Club, Oakland Public Schools," by Wilford E. Talbert, Oakland, Cal.

"The Vitalizing Principle in Education," by Edward J. Kunze, Agricultural and Mechanical College, Stillwater, Oklahoma.

Wednesday, August 4, 2 P.M.

General Subject for the Day.—"Scientific Study of Educational Problems."

Place of Meeting.—Department of Education, Stanford University.

"Measuring a School System by the Buckingham Spelling Scale," by L. W. Sackett, University of Texas, Austin, Texas.

"Spelling Efficiency in the Oakland Schools," by L. B. Sears, Stanford University.

"Formal Discipline," by L. Edgar Coover, Stanford University.

"Some Notes on the Learning of Arithmetic," by Edward K. Strong, Jr., George Peabody College for Teachers, Nashville, Tennessee.

"Ability of Porto Rican Children in Learning English," by L. A. Robinson, Bay Ridge High School, Brooklyn, New York.

"Survey of Industries in Mechanical Occupations in New Orleans by the Division of Educational Research," by David Spence Hill, New Orleans, Louisiana.

"English in the Elementary Schools of Boise, Idaho," by Jennie Small, Boise, Idaho.

"High School Non-promotions and Some Factors that Affect Them," by George F. Hall, Schenectady, New York.